2012 Annual Groundwater Monitoring Report Taylor Lumber and Treating Superfund Site Sheridan, Oregon

Prepared for: Oregon Department of Environmental Quality

May 22, 2012 1843-00/Task 3



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1.0 Introduction

This Groundwater Monitoring Report describes the results of annual groundwater monitoring activities at and in the vicinity of the Taylor Lumber and Treating (TLT) Superfund Site located at 22125 SW Rock Creek Road in Yamhill County, Sheridan, Oregon (Site; Figure 1). This report was prepared for the Oregon Department of Environmental Quality (DEQ) under Task 3 of Task Order No. 57-08-28. The monitoring activities described in this report were conducted in general accordance with the Groundwater Monitoring Work Plan submitted to DEQ on April 22, 2011 (Work Plan; Ash Creek Associates, Inc. [Ash Creek], 2011). The Work Plan was technically based on the *Long-term Groundwater Monitoring and Reporting Plan -Taylor Lumber and Treating Superfund Site* prepared by the United States Environmental Protection Agency (EPA) in March 2010 (LGMP; EPA, 2010). The Work Plan was prepared to be fully inclusive of the LGMP; therefore, there are no significant changes to note between the LGMP and the Work Plan.

1.1 Background

The Site is a wood treating facility that was operated by TLT from 1946 until 2001, when TLT filed for bankruptcy. Pacific Wood Preserving of Oregon (PWPO) entered into a Prospective Purchaser Agreement (PPA) with the EPA and purchased the wood treatment portion of the facility. An Amendment to Agreement and Covenant Not to Sue between EPA and PWPO was finalized on May 26, 2011, and an Amended PPA between DEQ and PWPO was finalized on June 7, 2011. PWPO began operations at the Site in 2002, treating wood using copper- and borate- based solutions. Beginning June 7, 2011, PWPO began using a pentachlorophenol solution to treat wood.

A Record of Decision (ROD) for the Site was signed on September 30, 2005 (EPA, 2005). In accordance with the ROD, contaminated soils have been removed from the Site. However, contaminated soils and groundwater remain within the treatment plant area at the Site, enclosed by a soil-bentonite barrier wall. A low-permeability asphalt cap has been placed over the entire area enclosed by the barrier wall, which impedes the infiltration of stormwater into the groundwater located within the barrier wall. Four groundwater extraction wells have been installed within the barrier wall to stimulate an inward hydraulic gradient and prevent water from rising above the cap (EPA, 2010). The ROD identifies pentachlorophenol (PCP) as the contaminant of concern (COC) in Site groundwater (EPA, 2005).

1.2 Scope of Work

The scope of work was completed in general accordance with the Work Plan (Ash Creek, 2011). The following activities comprise the scope of work as summarized in the Work Plan:

- For health and safety purposes, measure organic vapors in the well headspace prior to monitoring and sampling activities.
- 2) Observe and note well conditions in the project field notes (Appendix A).

- 3) Measure water levels in Site monitoring wells as well as in extraction wells PW-01 through PW-04, located within the barrier wall.
- 4) Measure water quality parameters prior to sampling to determine water stability during purging and to qualify the representativeness of the samples.
- 5) Collect groundwater samples for PCP analysis from 18 monitoring wells located outside the barrier wall.
- Collect groundwater samples for PCP analysis from residential wells RW-01 and RW-02.

These activities are discussed in detail within this report as well as any deviations from the Work Plan.

2.0 Summary of Field Events

A field representative from Ash Creek conducted the 2012 annual groundwater monitoring event at the Site from April 9 through 11, 2012. Work was conducted in general accordance with the Sampling and Analysis Plan (SAP) in Appendix B of the Work Plan (Ash Creek, 2011). The Work Plan is provided as Appendix B of this report. As described in Section 1.2, field activities included well headspace monitoring and documentation of well conditions, measurement of depth to water from extraction and monitoring wells, and collection of groundwater samples from monitoring wells and one residential well. Table 1 lists the groundwater monitoring wells and residential wells that were gauged and sampled as part of the Site monitoring program. Any deviations from the Work Plan are discussed in Section 2.5 of this report. The location of the monitoring, extraction, and residential wells included in the monitoring program are shown on Figure 2.

2.1 Well Inspection and Headspace Screening

Prior to sampling, site conditions were recorded including temperature, precipitation, wind direction, and any other factors that could affect sample quality. The well monuments were inspected for signs of damage, and were noted accordingly in the field notes (Appendix A). In general the wells were in good condition, with the exception of missing bolts on some of the flush monument well covers (see notes in Appendix A). The bolt threads on these wells were stripped and could not be repaired during the monitoring event. The well lids were opened and the headspace around each well was screened for organic vapors using a photoionization detector (PID). Headspace concentration measurements were documented in the field notes provided in Appendix A. PID concentrations were consistently below 1 part per million (ppm; PID calibrated to 100 ppm isopropylbenzene), with the exception of MW-15S, which was measured at 1.2 ppm, indicating that breathing space conditions were safe for the field representative.

2.2 Groundwater Elevation Measurements

On April 9, 2012 groundwater elevation measurements were collected from 22 wells in accordance with the Work Plan (Ash Creek, 2011). The well lids and caps were opened a minimum of 5 minutes prior to collecting measurements so that the air pressure in the well had time to equilibrate with the ambient air pressure. Depth to groundwater measurements were conducted with an electronic water level probe in accordance with the SAP (see Appendix B of Appendix B). Depth-to-water measurements and groundwater elevation data are provided in Table 2. A groundwater potentiometric map for the Site and vicinity is provided on Figure 3.

2.3 Groundwater Sampling

Groundwater samples were collected from 18 monitoring wells and one residential well for PCP during the 2012 annual monitoring event. Groundwater was purged in each monitoring well before sampling using dedicated Teflon tubing and a peristaltic pump. Groundwater was purged from the residential well for 10 minutes before sampling. Field parameters, including temperature, pH, dissolved oxygen, oxidation-reduction potential, specific conductivity, and turbidity were collected during the purging process using a flow-through cell. Detailed groundwater sampling procedures are described in the SAP (see Appendix B of Appendix B). Field parameter measurements are documented in the field notes in Appendix A. After purging, groundwater samples were collected in accordance with the Work Plan (Ash Creek, 2011).

2.4 Handling of Investigation-Derived Waste

Investigation-derived waste (IDW) consisted of purge water and decontamination water. IDW generated during the monitoring event was placed in covered buckets and was transported to and disposed of in the drain located to the north of the stormwater treatment system (Figure 2). Disposable items, such as gloves, paper towels, etc., were disposed of as municipal waste.

2.5 Deviations from Work Plan

- During the 2011 monitoring event, the owners of residential well RW-02 told the field representative
 from Ash Creek that the residential well had not been operable for several years, and that the well
 water had historically been used for washing cars and had never been used for drinking water.
 The property owner stated that the residence used a municipal water supply for drinking water.
 Therefore, RW-02 was not sampled during the 2011 or 2012 monitoring events.
- Monitoring well MW-12S is constructed of 6-inch-diameter PVC casing. During the 2011
 monitoring event, it was determined that in order to purge a minimum of three well volumes using
 the maximum peristaltic pump flow rate, it would take approximately 4.5 hours to purge the well
 prior to sampling. In order to collect a groundwater sample representative of the aquifer in an

efficient timeframe, field parameters were measured every 5 minutes while purging the well. Once pH and temperature conditions reached values similar to results for the other wells at the Site, and the other field parameters stabilized (dissolved oxygen, turbidity, etc.), the well was considered adequately purged and ready for sampling. For consistency, this sampling procedure was repeated during the 2012 monitoring event. The total purge volume for MW-12S was approximately 0.3 well volumes during the 2011 monitoring event, and 0.7 well volumes during the 2012 monitoring event.

- During the 2011 monitoring event, water levels could not be measured in extraction well PW-03 because the extraction pump rigid tubing was covering the portal for inserting the water level tape. The well cap and tubing configuration could not be safely moved without potentially damaging the extraction pump setup. Prior to the start of the 2012 monitoring event, Ash Creek contacted the PWPO operations manager and requested that the extraction pump configuration be adjusted to allow water level tape access. This was completed before the start of the 2012 monitoring event and allowed a depth to water measurement to be made during the site-wide gauging event.
- An MS/MSD sample was collected in accordance with the Work Plan; however, the laboratory inadvertently neglected to analyze the samples. Implications for sample data quality are discussed in the data quality review provided in Appendix C.

3.0 Monitoring Results

3.1 Groundwater Elevation Results

A groundwater elevation contour map is provided on Figure 3. Groundwater flow at the site is from the northwest to southeast towards the South Yamhill River and is consistent with historical documentation of groundwater flow direction (CMH2MHill, 2003). The groundwater contour map in Figure 3 depicts a depression in the groundwater flow path that coincides with the perimeter or the barrier wall. Within the barrier wall, groundwater elevations are between 5 to 10 feet lower than the surrounding area as groundwater is being actively extracted from within the barrier wall. Within the barrier wall, the groundwater flow direction is not consistent with regional flow, and suggests that groundwater extraction from within the barrier wall has successfully produced a localized inward gradient.

3.2 Groundwater Analytical Results

The groundwater samples were submitted to ESC Lab Sciences (ESC) in Mt. Juliet, Tennessee for laboratory analysis of PCP by EPA Method 8270 (PCP only). ESC is certified to analyze PCP in water samples in the state of Oregon. A copy of the Oregon laboratory certification and analytical reports are included in Appendix C, along with a quality assurance/quality control (QA/QC) review of the data. Despite some laboratory data quality deviations, the results of the data quality review indicate that the data are of acceptable quality and are suitable for their intended purpose. The April 2012 groundwater analytical

results as well as historical analytical results are presented in Table 3. Analytical results for PCP for 2011 and 2012 are summarized on Figure 4.

4.0 Data Evaluation and Conclusions

Concentration trends (from February 2002 through May 2012) for PCP in groundwater from wells MW-1S, MW-11S, MW-15S, MW-16S, PZ-105, and MW-103S are provided in Appendix D. These wells were selected to evaluate long-term concentration trends in Site perimeter and off-site wells and to confirm that PCP in groundwater has not migrated south to the South Yamhill River or to the east under Rock Creek Road. The trend plots for wells MW-15S, MW-16, MW-103S, and PZ-105, all located to the south of the Site, were either stable or decreasing. PCP concentrations in groundwater in wells located to the south of Highway 18B (MW10S, MW-24S and MW-9S) were non-detect during the April 2012 monitoring event. The data confirm that migration to the south towards the South Yamhill River is not occurring.

Trend plots for wells MW-1S and MW-11S were used to confirm that PCP in groundwater was not migrating beyond the Site barrier wall and to the east under Rock Creek Road. Concentrations in MW-1S have decreased from 14 micrograms per liter (μ g/L) in November 2002 to non-detect in both April 2011 and April 2012. Concentrations in MW-11S have decreased from 0.87 μ g/L in April 2011 to non-detect in April 2012. While concentrations of PCP in well MW-11S have historically varied between detections slightly over reporting limits and having no detectable PCP, there have been no significant increases in PCP concentrations in the well that would indicate that eastern migration is occurring.

Concentrations of PCP have been non-detect in water wells RW-01 and RW-02 since wells were initially sampled in 1999. As discussed in Section 2.5, according to the residential property owner, the well pump at RW-02 has been out of operation for several years. The residents indicated that the well had not been used for drinking water purposes, and only for occasional car washing. The residence is now connected to the municipal water supply. It is anticipated that the water well pump will not be repaired and that well RW-02 will remain out of operation. Based on this well assessment, EPA notified DEQ (via email) on April 30, 2012 that well RW-02 should be removed from the project work plan. Residential well RW-02 will be removed from the work scope for future monitoring events.

5.0 References

- Ash Creek Associates, Inc. (Ash Creek), 2011. *Groundwater Monitoring Work Plan Former Taylor Lumber Site, Sheridan, Oregon.* April 22, 2011.
- CH2MHill, 2003. Remedial Investigation Report Taylor Lumber and Treating Superfund Site Sheridan, Oregon Volume I. October, 2003.
- U.S. Environmental Protection Agency (EPA), 2005. *Final Record of Decision Taylor Lumber and Treating Superfund Site, Sheridan, Oregon.* September 30, 2005.
- EPA, 2010. Long-term Groundwater Monitoring and Reporting Plan. Taylor Lumber and Treating Superfund Site. March, 2010.

Table 1
Groundwater Monitoring Program
Taylor Lumber and Treating

Well I.D.	Wells to be Sampled	Water Level Measurments*			
Outside Barrier Wall					
MW-1S	Χ	Х			
MW-6S	Χ	Χ			
MW-6D	Χ	Χ			
MW-12S	Χ	Χ			
MW-13S	Χ	Χ			
MW-15S	Χ	Χ			
MW-16S	Χ	Χ			
MW-19S	Χ	Χ			
MW-20S	Χ	Χ			
MW-25S	Χ	Χ			
MW-103S	Χ	Χ			
PZ-101	Χ	Χ			
PZ-102	Χ	Χ			
PZ-105	Χ	Χ			
South of Highway 18B					
MW-9S	Χ	Χ			
MW-10S	Χ	Χ			
MW-24S	Χ	Χ			
East of Rock Creek Road					
MW-11S	Χ	Χ			
Residences**					
RW-01	Χ				
RW-02	Χ				
Extraction Wells Inside Barr	rier Wall				
PW-1		Х			
PW-02		Χ			
PW-03		Χ			
PW-04		Χ			

- 1. * = Indicates wells in which water level measurements will be collected.
- 2. ** = Residential addresses and contact information are as follows:

RW- 01: (b) (6) RW-02: (b) (6) **MW-9S:** (b) (6)

MW-11S: Northwest Gazebo - George Gabriel owner - 503-843-0024

Notes: See footnotes in Tables 2 and 3 for any deviations from the monitoring plan.

The EPA Long Term Groundwater Monitoring and Reporting Plan (EPA, 2010) depicted Well MW-9S as both "Outside the Barrier Wall" and "South of Highway 18B". The tables in this report have been revised to denote well MW-9S as "South of Highway 18B" only.

Table 2 Groundwater Elevation Results Taylor Lumber and Treating

Well Number/	Date of	Depth to Water	Groundwater Elevation
(TOC Elevation)	Measurement	(feet BTOC)	(feet)
Outside Barrier Wall	_		
MW-1S (207.41)	4/9/2012	3.10	204.31
MW-6S (204.39)	4/9/2012	2.80	201.59
MW-6D (204.04)	4/9/2012	2.45	201.59
MW-12S (204.49)	4/9/2012	2.90	201.59
MW-13S (204.92)	4/9/2012	3.22	201.70
MW-15S (204.68)	4/9/2012	2.87	201.81
MW-16S (205.19)	4/9/2012	2.89	202.30
MW-19S (210.44)	4/9/2012	5.72	204.72
MW-20S (208.87)	4/9/2012	6.32	202.55
MW-25S (208.74)	4/9/2012	6.14	202.60
MW-103S (207.62)	4/9/2012	3.77	203.85
PZ-101 (208.48)	4/9/2012	3.59	204.89
PZ-102 (204.02)	4/9/2012	3.76	200.26
South of Highway 18B	•	•	
PZ-105 (205.94)	4/9/2012	4.16	201.78
MW-9S (204.04)	4/9/2012	6.96	197.08
MW-10S (203.17)	4/9/2012	9.83	193.34
MW-24S (205.49)	4/9/2012	13.43	192.06
MW-11S (207.27)	4/9/2012	2.91	204.36
Extraction Wells Inside Ba	rrier Wall		
PW-1 (203.93)	4/9/2012	6.67	197.26
PW-02 (204.96)	4/9/2012	8.87	196.09
PW-03 (206.3)	4/9/2012	10.54	195.76
PW-04 (206.98)	4/9/2012	11.42	195.56

Table 3 Groundwater Analytical Results Taylor Lumber and Treating

Well ID	Date of Measurement	Pentachlorophenol (μg/L)							
Outside Barrier V	/all								
MW-1S	5/1/1999*								
	Feb-02	<25							
	May-02	6.9							
	Aug-02	14							
	Nov-02	14							
	Feb-03	6 J							
	May-03	3.3							
	4/27/2011	< 0.33							
	4/10/2012	<0.41 J4,J3							
MW-6S	May-99	<25							
	Feb-02	0.82							
	May-02	0.88							
	Aug-02	1							
	Nov-02	0.88 J							
	Feb-03								
	May-03								
	4/26/2011	< 0.33							
	4/26/2011 DUP	< 0.33							
	4/10/2012	<0.41							
	4/10/2012 DUP	<0.41							
MW-6D	4/26/2011	<0.33							
	4/10/2012	<0.41							
MW-12S	May-99								
	Feb-02	0.32							
	May-02	0.3							
	Aug-02	0.45							
	Nov-02	0.22 J							
	Feb-03								
	May-03 4/26/2011	<0.33							
	4/10/2012	<0.33 <0.41							
MM/ 12C									
MW-13S	May-99	 0.25							
	Feb-02	0.25 0.25							
	May-02 Aug-02	0.25							
	Nov-02	2.6 J							
	Feb-03	<0.32							
	May-03	< 0.56							
	4/26/2011	<0.33							
	4/10/2012	<0.41							
MW-15S	May-99								
10100-133	Feb-02	220							
	May-02	220							
	Aug-02	250							
	Nov-02	210							
	Feb-03	130							
	May-03	190							
	4/26/2011	12							
	4/10/2012	15 J4,J3							
L	-	.,							

Please refer to notes at end of table.

Table 3 Groundwater Analytical Results Taylor Lumber and Treating

Well ID	Date of Measurement	Pentachlorophenol (µg/L)
MW-16S	May-99 Feb-02	 10.0
	May-02	15.0
	Aug-02	28.0
	Nov-02	21 J
	Feb-03	11.0
	May-03	11.0
	4/26/2011	11.0
	4/26/2011 DUP 4/10/2012	11.0 5.8
	4/10/2012 DUP	8.7
MW-19S	May-99	
	Feb-02	
	May-02	
	Aug-02	0.067
	Nov-02 Feb-03	<0.32 <0.32
	May-03	0.061
	4/27/2011	< 0.33
	4/11/2012	<0.41
MW-20S	May-99	
	Feb-02 May-02	
	Aug-02	0.013 J
	Nov-02	<0.32
	Feb-03	<0.32
	May-03	0.027 J
	4/27/2011	<0.33
101/050	4/11/2012	<0.41
MW-25S	12/19/2005 12/19/2005 DUP	424 396
	4/27/2011	230
	4/11/2012	200
MW-103S	May-99	5.6
	Feb-02	6.4
	May-02	7 12
	Aug-02 Nov-02	12 4.7 J
	Feb-03	4.7 J 5
	May-03	20
	4/27/2011	1.6
	4/11/2012	1.4
PZ-101	May-99	<25 0.14
	Feb-02 May-02	0.14 0.15
	Aug-02	0.13
	Nov-02	1.1 J
	Feb-03	
	May-03	0.067
	4/27/2011	< 0.33
PZ-102	4/11/2012 May 99	<0.41
PZ-102	May-99 Feb-02	<25 0.37
	May-02	0.3
	Aug-02	0.34
	Nov-02	0.13 J
	Feb-03	0.23 J
	May-03	<0.32
	4/27/2011	<0.33
	4/10/2012	< 0.41

Please refer to notes at end of table.

Table 3 Groundwater Analytical Results Taylor Lumber and Treating

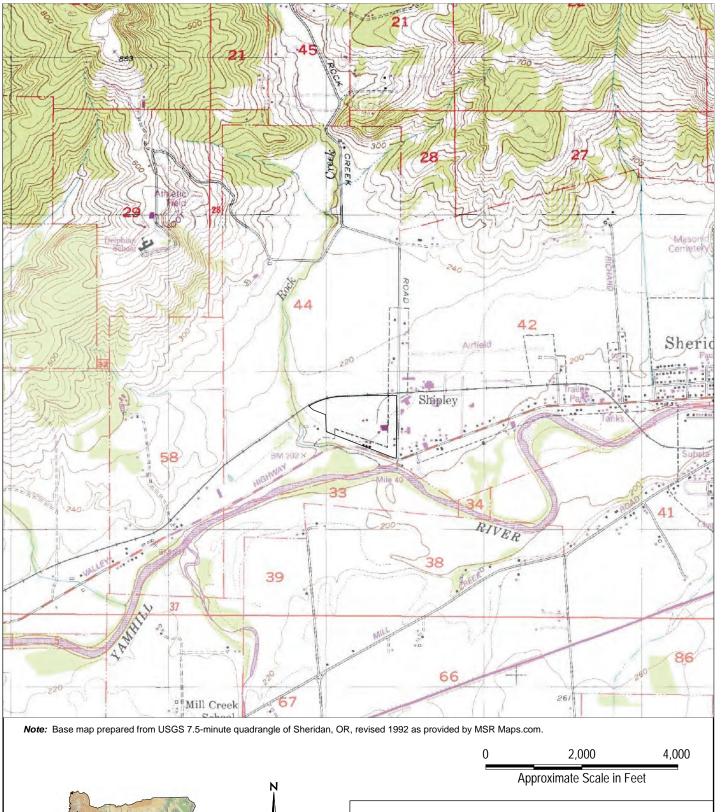
Well ID	Date of	Pentachlorophenol							
	Measurement	(µg/L)							
PZ-105	May-99	82 J							
	Feb-02	3.5							
	May-02	8.2							
	Aug-02	17							
	Nov-02	4.0 J							
	Feb-03	0.77							
	May-03	2.6							
	4/26/2011	< 0.33							
	4/10/2012	<0.41							
South of Highway	18B	•							
MW-9S	May-99	<24							
	Feb-02	< 0.047							
	May-02	< 0.049							
	Aug-02	< 0.023							
	Nov-02	< 0.32							
	Feb-03	< 0.32							
	May-03	< 0.046							
	4/26/2011	< 0.33							
	4/11/2012	< 0.41							
MW-10S	May-99	<26							
	Feb-02	0.099							
	May-02	0.13							
	Aug-02	0.38							
	Nov-02	0.18 J							
	Feb-03	< 0.32							
	May-03	0.13							
	4/27/2011	< 0.33							
	4/11/2012	< 0.41							
MW-24S	4/27/2011	< 0.33							
	4/11/2012	<0.41 J4,J3							
East of Rock Cree	k Road								
MW-11S	May-99	<25							
	Feb-02	0.18							
	May-02	0.18							
	Aug-02	0.36							
	Nov-02	< 0.32							
	Feb-03	< 0.32							
	May-03	0.18							
	4/27/2011	0.87 J							
	4/11/2012	<0.41							
Residences		•							
RW-01	May-99	<25							
	Feb-02	< 0.045							
	May-02	< 0.049							
	Aug-02	<0.046							
	Nov-02	< 0.32							
	Feb-03	< 0.045							
	May-03	<0.046							
	4/27/2011	< 0.33							
	4/11/2012	<0.41							

Please refer to notes at end of table.

Table 3
Groundwater Analytical Results
Taylor Lumber and Treating

Well ID	Date of Measurement	Pentachlorophenol (µg/L)
RW-02	May-99	
	Feb-02	< 0.045
	May-02	0.026 J
	Aug-02	0.046 J
	Nov-02	< 0.32
	Feb-03	
	May-03	0.026 J
	4/26/2011	
	4/10/2012	

- 1. Sample dates for historical (pre-2005) data are not available; results available in month/year format only.
- 2. J = Detected value was below the lowest calibration point for the analysis; therefore, results are estimated.
- 3. J3 = The relative percent difference (RPD) is above the method limit.
- 4. J4 = The laboratory control sample or laboratory control sample duplicate is outside control limits.
- 5. -- = Not Sampled
- 6. BOLD indicates analyte detected above method reporting limit.
- 8. DUP = Duplicate sample.
- 9. *= RW-02 not sampled during April 2011 monitoring event. During the monitoring event the residential property owner indicated that the water well pump was no longer operable. For this reason, RW-02 was not sampled during the April 2012 monitoring event.



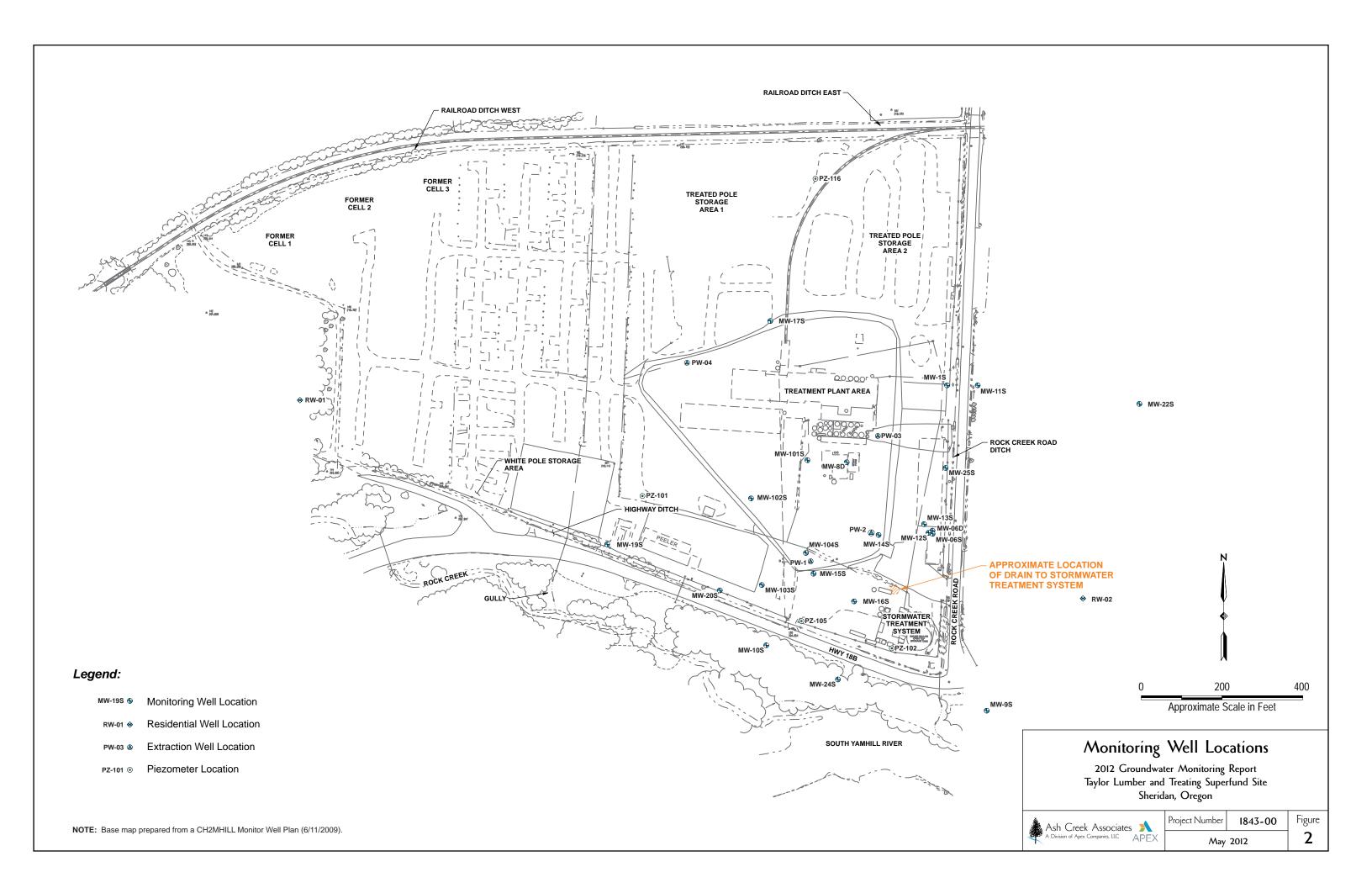


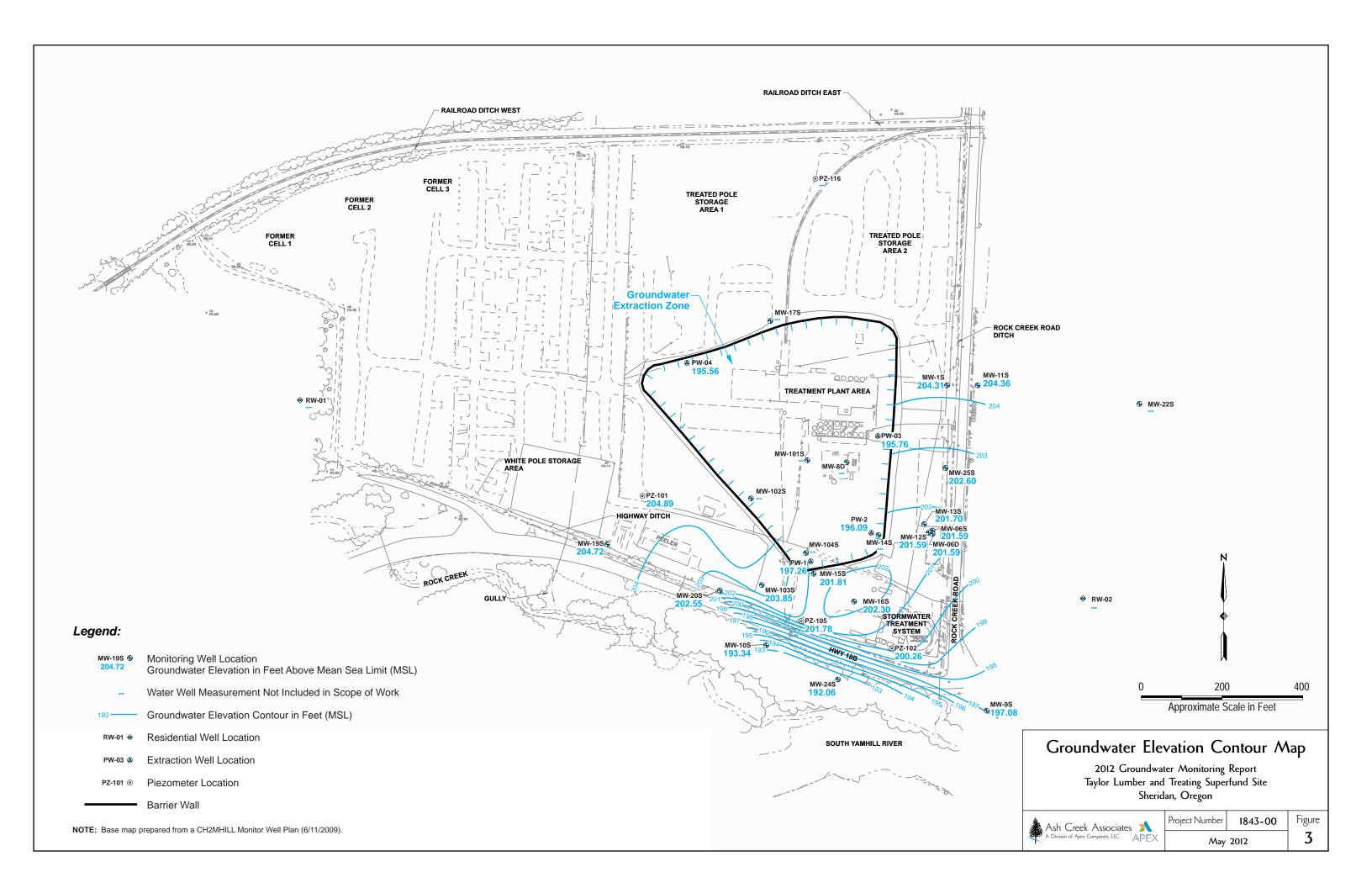
Site Location Map

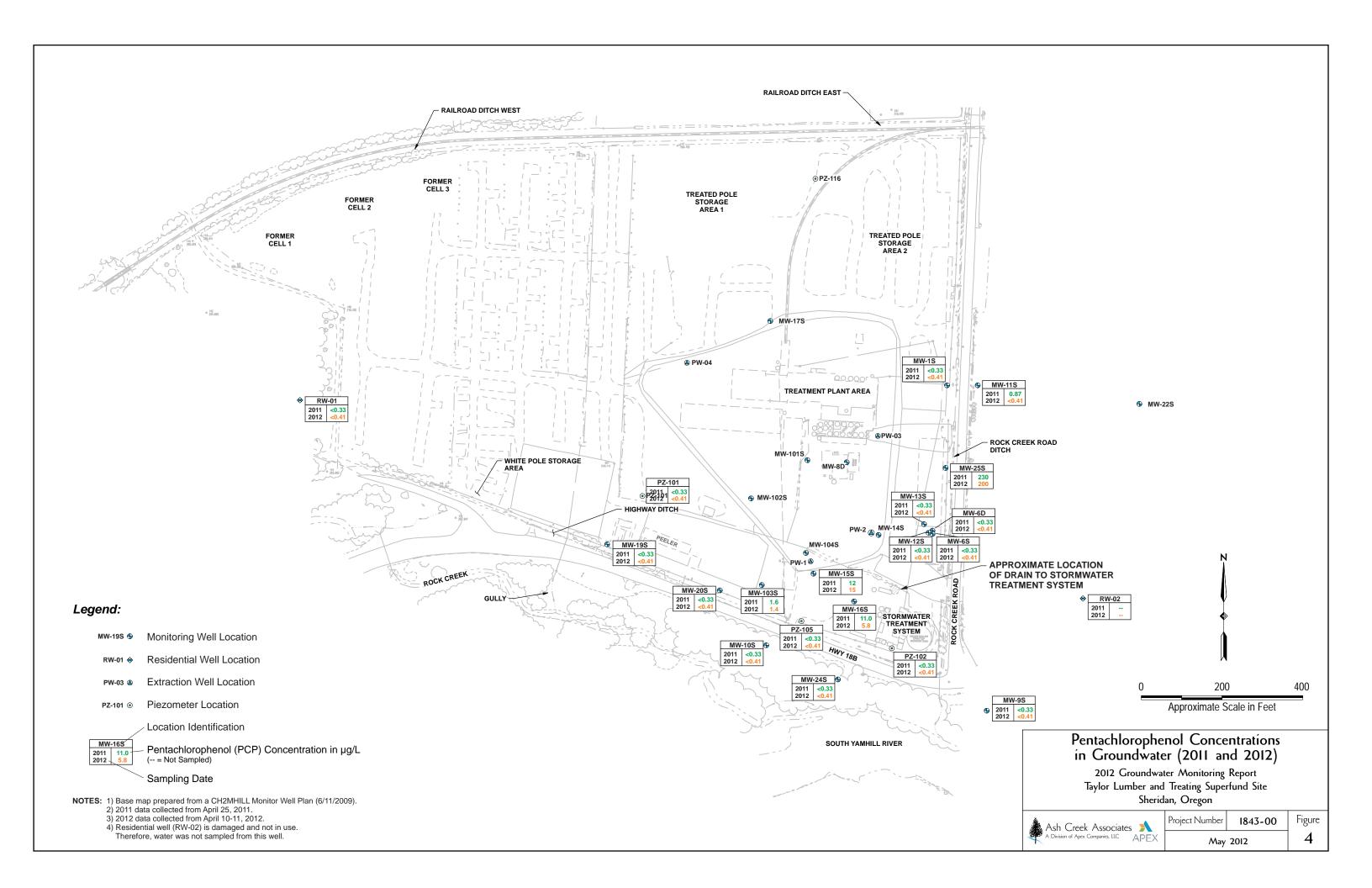
2012 Groundwater Monitoring Report Taylor Lumber and Treating Superfund Site Sheridan, Oregon



Project Number	1843-00	Figure
May	1	









WELL GAGING DATA SHEET

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Ash Creek Associates, Inc.	
Invironmental and Geotechnical Consultants	

Invienmental and Gesterbrical Consultants				Project:	Taylor Lumbe	r GWM	Sampler:	M. Whitson
				Weather:	60°F CLOUDY/CALM		Time In/Out:	
				WATER L	EVEL DATA			Ţ
Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Headspace PID (ppm)	Notes/Other Remarks
P2-102	1353	_	3.76	12.2	_		0.1	2"
MW-165	1355		2,89	13.5	_		0.4	2"
MW-155	1358		2.87	12.5			1.2	2"
P2-105	1402	-	4.16	12.0			0.0	2"
MW-1035	1405		3.77	16.0	_		0.1	2" ONLY I BOLT
MW-205	1407	_	632	14.5	_		0.4	2"
MW-195	1410		5.72	15.5			0.0	2"
PZ-101	1415	_	3,59	13.5			0.0	2"
MW-15	1421		3.10	15	-		0.1	2"
MWHIS	1425		2.91	19.5	_		0.0	2"
MW-255	1428		6.14	19.3	_		0,1	2"
MW-135	1432_		3.22	14	_		0.0	2" NO BOLTS
MW-125	1435		2.90	12			0.0	6"
MW-065	1440	-	2.80	11.9			0.2	2" MISSING BOLT
MW-06D	1443	_	2.45	29.2	-		0.3	2" MISSING BOLT
MW-95	1455	_	6.96	14.3			0.0	2"
MW-245	1459		13,43	17.2			0,0	2"
MW-105	1505		9.83	11.5			0.0	2"
PW-1	1524		6.67		_			
PW-4	1530		11.42					
PW-3	1535	_	10.54		~		_	
PN-2	1545		8.87					
						i		
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				Well I.D.	PZ-105			Job Number: 1843-00/Task 3			
	Ach Cre	el Associ	ístes Inc		Client:	Oregon DEG			Date:	04/10/12	
* (Environmental and (ek Associ Geolechnical Consult	arts	•	Project:	Taylor Lumb			Sampler:	M. Whitso	
					Weather:	OVERCA	65 (49	°F)	Time In/Out:	0800	/
		T			T	WELL DATA					
Well Depth	ı <u>;</u>	12.			Well Diamet	ter:	2	2.0"	Water Heigh	<u>nt</u>	7.75 10.75
Depth to W	ater:		5 '-3.0'		Screened In				x Multiplier		0.162
	umn Length:	7.7	75 10.	<u>15 '</u>	Depth to Fre				x Casing Vo		3
Purge Volu	**************************************	<u></u>	r		Free Produc				= Purge Vol		1.251.75
Water H	Height Multip	pliers (gal)	1-inch	= 0.041		= 0.162 PURGING DA		inch = 0.653	1 gallon = 3	.785 liters	3.75 5.22
Purge Meth	nad.	Per	ristaltic Pun	~n	Pump Intake		7	Feet Below Water	Surface		Comments
Sampling M			Low F/ow	пр	Tubing Type		0.17	"X 0.25" Teflon (De			Olimens
Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)		Purge Rate (gal/min)	pН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
0832	_		4.25	0.16	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria
0843	1.75	1.75	7.20	0.16	6.01	10.37	83	3.11	121.5	18.6	C
D854	1.75	3.50	7.01		6.21	10.64	84	1.69	89.1	16.9	<u>_</u>
0905	1.75	5,25	7.09		6.23	10.95	84	1.17	65.9	15.4	<u>_</u>
0916	1.75	7.00	7.2]		6.24	10.73	83	0.13	54./	13.8	С
0927	1,75	8.75	6.95		6,28	10.91	83	0.09	47.2	12.7	C
0938	1.75	10.50	6.94		6,29	10.85	83	0.14	40.5	12.3	С
											f.
		С	larity: VC	= very cloud		dy, SC = sligh		AC = almost clear, (C = clear		
Come	-1-10:	P2-105		Compling		0.16		Analytical Laborate		ESC	I ah Sajangan
	ole ID: e Time:	0945		Sampling	th to Water:	6,18		Analytical Laborato Did Well Dewater?			Lab Sciences
# Contain		Preserv			is/Method	Field Fil		Filter Si:		MS/MSD	Duplicate ID
2 X 1 Liter A		NEA			PCP	yes	no		<u>ce</u>		- Duplicate 15
277.											
						COMMENTS	5				
											
<u> </u>											

										101000=	
					Well I.D.	MW - 1			Job Number: 1843-00/Task 3		
	Ash Cre	ek Associ Georechnical Consulta	ates, Inc	•	Client:	Oregon DEG			Date:		
7.	Environmental and (Geotechnical Consulti	ants		Project:	Taylor Lumb			Sampler:	M. Whitso	7
					Weather:	CLOUPY	(51°F)	CALM WINDS	Time In/Out:	0950/	
			- 1			WELL DAT		11		······································	
Well Depth	:	12.5		,	Well Diamet	er:		Z.D"	Water Heigh	nt	9.52
Depth to W	ater:	2.0			Screened In	terval:			x Multiplier		0.162
Water Colu	ımn Length:	9,52			Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:				Free Produc	t Thickness:			= Purge Vol	ume	1,54
Water	leight Multi	oliers (gal)	1-inch	= 0.041	<u> </u>	= 0.162		nch = 0.653	1 gallon = 3	.785 liters	4.63
					F	PURGING DA	TA				
Purge Meth	nod:	Per	istaltic Pur	пр	Pump Intake	Depth:		Feet Below Water		<u>C</u>	omments
Sampling M	/lethod:		Low Flow	1	Tubing Type	<u>: </u>	0.17'	" X 0.25" Teflon (De	dicated)		
Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
0958			2.98'	0.13	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria
1010	1.54	1.54	3.13	0.13	6.28	10.82	459	0.23	86.2	0.45	C
1022	1.54	3,08	3.19		6.31	10.81	456	0.26	71.6	0.31	С
1034	1.54	4.62	3,20		6.32	10.85	453	0.21	66.0	0.51	C
			:								
		C	larity: VC	= very cloud		ly, SC = sligh AMPLING DA		AC = almost clear, (C = clear		
Samp	ole ID:	MW-19	9	Sampling		0.13		Analytical Laborato	orv:	ESC I	ab Sciences
Sample		1045			th to Water:	3.05		Did Well Dewater?			N
# Contain		Presen			is/Method	Field Fil		Filter Siz		MS/MSD	Duplicate ID
2 X 1 Liter		NEA			PCP	yes	no	7 Intel OI			
LA LIGIT	01000										
COMMENTS											
						·					
										_	

					Well I.D.				Job Number	: 1843-00/Ta	ask 3
	Ash Cree	ek Associ	ates Inc		Client:	Oregon DEC			Date:	04/10/	12
7	Environmental and (Geotechnical Consult	ans IIIC	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	on
					Weather:	OVERLA	TKLOUDY	r (57°F) CALM	Time In/Out:	1055/	
						WELL DAT	A				
Well Depth	า:	13.	<u>5'</u>		Well Diamet	ter:		2"	Water Heigl	ht	10.53
Depth to W	/ater:	2.0	17'		Screened In	terval:			x Multiplier		0.162
Water Colu	umn Length:	10.5	3		Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	ıme:				Free Product Thicknes				= Purge Vol	ume	1.70
Water	Height Multip	oliers (gal)	1-inch	= 0.041	2-inch	= 0.162	4-	inch = 0.653	1 gallon = 3	3.785 liters	5.12
<u></u>						PURGING DA	T T				
Purge Metl	hod:	Per	istaltic Pur	пр	Pump Intake	e Depth:		Feet Below Water	Surface		Comments
Sampling N	Method:		Low Flow	1	Tubing Type	<u>:</u>	0.17	" X 0.25" Teflon (De	dicated)		
Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	pН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1103		-	2.97	0.15	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteri
1114	1.70	1.70	3.76	0.15	6.35	11.74	4360	0.20	87.7	0.37	C
1125	1.70 3.40 3.84				6.39	12.09	446	0.13	71.9	0.26	C
11360	1.70	5.10	3.92		6.42	12.11	456	0.19	67.3	0.15	C
→ 1.13.11.11.11.11.11.11.11.11.11.11.11.11											
<u></u>											
		C	ianty: VC	= very clou		AMPLING D		AC = almost clear,	∪ = clear		
Samp	ple ID:	MW-1	65	Sampling	Flow Rate	0.15		Analytical Laborato	ory:	ESC	Lab Sciences
	e Time:	1145			oth to Water:	3.24		Did Well Dewater?			N
	ners/Type	Presen	vative		is/Method	Field Fi	Itered	Filter Si	ze _	MS/MSD	Duplicate ID
	X 1 Liter Amb Glass NEAT					yes	no				MW-165 DU
ZX I Liter.		,			PCP yes no					YE5	MW-165 MY1
ZX I Liter.						COMMENT	-				

					Well I.D.				Job Number: 1843-00/Task 3		sk 3
A.	Ash Cre	ek Associ	ates Inc		Client:	Oregon DEC	?		Date:	04/10/1	12
7	Environmental and	ek Associ Georechnical Consult	ants	•	Project:	Taylor Lumb	er GWM	ε	Sampler:	M. Whitson	n
					Weather:	DVERCAST	LUOVOY	(59°F CALM)	Time In/Out:	1200/	
						WELL DAT		·	1		
Well Depth	ı: 	12.5			Well Diamet	er:		2"	Water Heigh	nt	8.30
Depth to W	/ater:	3.90			Screened In	terval:			x Multiplier		0.162
Water Colu	umn Length:	8.3	0		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	ıme:		<u> </u>		Free Produc				= Purge Vol	ume	1.34
Water	Height Multi	oliers (gal)	1-inch	= 0.041	<u> </u>	= 0.162		inch = 0.653	1 gallon = 3	.785 liters	4.03
						PURGING DA				T	
Purge Met			istaltic Pun	np	Pump Intake			Feet Below Water		<u>C</u>	omments
Sampling N	1	Cumulative	Low Flow	Duras	Tubing Type	: 	0.17	" X 0.25" Teflon (De	dicated)		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1209			3.90'		+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1219	1.34	1.34	4.15	0.13	6.87	11.30	378	0.25	61.9	0.47	<u>C</u>
1229	1.34	2.60	4.16		6.86	11.56	474	0.13	46.4	0.28	C
1239	1.34	4.02 4.19' 5.36 4.20'			6.82	11.50	526	0.10	31.0	0.63	<u>C</u>
1249	1.34	5.36	4.20		6.81	11.47	560	0.08	34.8	0:27	С
1259	1.34	6.70	4.20'		6.90	11.50	570	0.08	32.1	0.68	C
				-							
		C	larity: VC	= very clou		dy, SC = sligh		I AC = almost clear, (C = clear		
Samp	ole ID:	Pz-10	72	Sampling	Flow Rate	0.13		Analytical Laborato	ory:	ESC I	Lab Sciences
	e Time:	130			oth to Water:	3.99	, ' 	Did Well Dewater?			N
******	# Containers/Type Preservative Ana					Field Fi		Filter Si		MS/MSD	Duplicate ID
	X 1 Liter Amb Glass NEAT					yes	no				•
_						COMMENT	•				
						COMMENT	3				
				·							

Ash Creek Associates, Inc.					Well I.D.	MW-13	5		Job Number	: 1843-00/Ta	nsk 3
	Ash Cre	ek Associ	iates Inc		Client:	Oregon DEC	2		Date:	04/10	112
	Environmental and	Geotechnical Consult	lants	••	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	
					Weather:	CLOUDY	(63°F)	CALM	Time In/Out:	1310/	
						WELL DAT					
Well Depth	n:		1'		Well Diame	ter:		2"	Water Heig	ht	10.74
Depth to W	/ater:	3.2	عا.		Screened In	iterval:			x Multiplier		0.162
Water Colu	ımn Length:	10.	74 '		Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	ıme:		Т		Free Produc	t Thickness:			= Purge Vol	ume	1.74
Water I	Height Multi	pliers (gal)	1-inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3	3.785 liters	5.22_
						PURGING DA				T	
Purge Meth	nod:	Per	istaltic Pur	пр	Pump Intake	e Depth:	2	Feet Below Water	Surface	c	omments
Sampling N	Method:	Cumulative	Low Flow	1	Tubing Type): T	0.17	" X 0.25" Teflon (De	dicated)		<u> </u>
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1322	-		3.26		+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1333	1.74	1.74	3.99	0.16	6.38	10.52	717	1.00	120.2	2.04	C
1344	1.74	3,48	4,00		6.38	10,50	811	0.50	86,4	1.14	<u> </u>
355	1.74	5.22 4.00			6.39	10.48	836	0.36	72.2	1.14	C
1406	06 1.74 6.96 4.00			6.40	10.49	854	0.27	66.7	0.59	C	
			In 140		dia Cha Cha	di 60 - 11 1	Alexander de	AC = al====1=1=	0 1		
		С	iarity: VC	very clou		dy, SC = sligh AMPLING D		AC = almost clear, (∪ = clear		
Samp	ole ID:	MW-13	75	Sampling	<u></u>	0.16		Analytical Laborato	ory:	ESC I	ab Sciences
Sample		1415			th to Water:	3.37		Did Well Dewater?			N
	# Containers/Type Preservative Anal					Field Fi		Filter Si:		MS/MSD	Duplicate ID
	2 X 1 Liter Amb Glass NEAT					yes	по				
					PCP						
						COMMENT	S				
		****			· · · · · · · · · · · · · · · · · · ·					-	
	-	,	.,								

Ash Creek Associates, Inc.					Well I.D.				Job Number: 1843-00/Task 3		isk 3
	Ash Cree	ek Associ	iates Inc		Client:	Oregon DEC	2		Date:	04/10	/12_
	Environmental and	Geotechnical Consult	ants	···	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
					Weather:	V. LT PAIN	1/CLOUDY	(63°F)CHLM	Time In/Out:	1420/	<i>′</i>
						WELL DAT	A				
Well Depth	า:		2'		Well Diame	ter:		6"	Water Heigh	<u>nt</u>	8-96'
Depth to W	Vater:		04'		Screened In	terval:			x Multiplier		1.46
Water Coli	umn Length:	8.	96'		Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	ıme:		Г		Free Produc	t Thickness:			= Purge Vol	ume	13.08
Water	Height Multi	pliers (gal)	1-inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3	.785 liters	39.25
		<u> </u>		······		PURGING DA	ATA			T	
Purge Met			istaltic Pur	пр	Pump Intake	.,	Feet Below War			c	Comments
Sampling I	1	Cumulative	Low Flow	T	Tubing Type); 	0.17	" X 0.25" Teflon (De 	dicated)		1
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рΗ	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1424		-	3,04		+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1454	5.4	5.4	4,09	0.18	6,86	9.62	791	7.29	78.9	0.59	C
1459	0.9	6.3	4.09		6,87	9,62	793	7.21	74,5	2.02	C
1504	0.9	7.2	4,09		6,86	9.65	796	7.06	70.2	2.02	<u></u>
1509	0.9	8.1	4.09		6.85	9.67	799	6,78	65.2	2,00	C
1514	0.9	9,0	4.09		6.85	9.66	800	(0,60	62.8	2.10	C
,											
		C	larity: VC	= very clou	dy, Cl = Cloud	dy, SC = sligh	itly cloudy,	AC = almost clear,	C = clear		
						AMPLING D	ATA			,	
Sam	ple ID:	MW-1		Sampling	Flow Rate	0.18	<u> </u>	Analytical Laborate	огу:		Lab Sciences
Sampl	e Time:	1520	2	Final Dep	oth to Water:	3.71		Did Well Dewater?	>		<u>N</u>
# Contail	ners/Type	Presen	vative	Analys	is/Method	Field Fi		Filter Si	ize	MS/MSD	Duplicate ID
2 X 1 Liter	Amb Glass	NEA	AT	F	PCP	yes	(no)				
						COMMENT	S				
1445	STARTS	PAININ	9 (SHOV	VER)							
							,				

	Ash Creek Associates, Inc.					MW-00	05		Job Number: 1843-00/Task 3		nsk 3
A.	Ash Cre	ek Associ	iates Inc		Client:	Oregon DE	Q		Date:	04/10	1/12
	Environmental and	Geotechnical Consul	iants	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
				-	Weather:	CLOUD'	Y (64°F	=) CALM	Time In/Out:	1520	/
		_				WELL DAT	Α		1		
Well Depth	:		.9'		Well Diamet	er:		2"	Water Heigl	<u>ht</u>	8.82
Depth to W	ater:		.08		Screened In	terval:			x Multiplier		0.162
Water Colu	ımn Length:	5,	82		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:		T		Free Produc	t Thickness:			= Purge Vol		1,43
Water I	Height Multi	pliers (gal)	1-inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3	3.785 liters	4,29
	•	Γ .	5			PURGING DA	1 7				
Purge Meth			ristaltic Pun	пр	Pump Intake Depth:		0.17	Feet Below Water		C	omments
Sampling N	Volume Purged (gallons)	Cumulative Volume Purged	DTW (btc)	Purge Rate (gal/min)	Tubing Type	Temp (°C)	Cond (µS/cm)	" X 0.25" Teflon (De	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1532		(gallons)	3,08	0.16	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1541	1.43	1.43	4.65	0.16	7.14	10,43	2,052	0,29	77,0	0.75	C
1550	1,43	2.86	4.85		7,17	11,48	2,094	0.28	63.9	0.6]	<u>C</u>
1559	1,43	4.29				11,78	2,482	0.15	23.3	0.76	<u>C</u>
1608	1,43	5.72			7.50	12,05	2,977	0.09	-9.9	1.10	C
1617	1,43	7,15	4,93	,	7,50	12.11	2,991	0.05	-B.8	0.63	C
1676	1,43	8.58	4.93		7,48	12.03	2,996	0.05	-9,4	0.31	С
					· (*						
			_			, t			*		
											:
		С	larity: VC	= very clou	dy, CI = Cloud S	dy, SC = sligh AMPLING D	itly cloudy, ATA	AC = almost clear, (C = clear		
Samp	le ID:	MW-0	65	Sampling	Flow Rate	0.10	7037444	Analytical Laborato	ory:	ESC I	ab Sciences
Sample	Time:	1630)	Final Dep	th to Water:	3.6	9	Did Well Dewater?			N
# Contain	# Containers/Type Preservative Anal					Field Fi		Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter /	Amb Glass	NEA	A <i>T</i>	F	PCP	yes	no		r .		MW-06SDUP
						COMMENT	S				
											, , , , , , , , , , , , , , , , , , , ,
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Ash Creek Associates, Inc.					Well I.D.				Job Number: 1843-00/Task 3		
A	Ash Cre	ek Associ	iates Inc		Client:	Oregon DEC	2		Date:	04/10	12
	Environmental and	Geotechnical Consult	iants	••	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	
					Weather:	CLOUDY	(63°F)) CALM	Time In/Out:	1635/	
						WELL DAT	A				
Well Depth):	20	1.2'		Well Diamet	ter:		2"	Water Heigl	nt	26.56
Depth to W	/ater:	2.0			Screened In	terval:			x Multiplier		0,162
Water Colu	ımn Length:	26	256		Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	me:		T		Free Produc	t Thickness:			= Purge Vol	ume	4.30
Water I	Height Multi	pliers (gal)	1-inch	= 0.041	2-inch	= 0.162	4-inch = 0.653		1 gallon = 3	.785 liters	12,91
		П			1	PURGING DA	NTA			Г	
Purge Meth	nod:	Per	ristaltic Pur	np	Pump Intake	e Depth:	_ 2	_ Feet Below Water	Surface	C	omments
Sampling N	/lethod:	Cumulative	Low Flow	T	Tubing Type): 	0.17	" X 0.25" Teflon (De	dicated)		I
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)		Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1643		-	2.64	0.18	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1703	3.6	3,6	3,18	0.18	6.72	9,88	972	0.13	40.7	0,82	<u></u>
1708	0.9	4.5	3.20		6,67	9,89	953	0,10	41,9	0.44	<u></u>
1713	0.9				الاها، عا	9,91	958	0.09	39.6	0,36	C
1718	18 0.9 6.3 3.21			6,67	9,94	952	0,08	40,5	0.24	<u></u>	
		_									
		<u> </u>									
			1 1 1/0				41				
			iarity: VC	- very clou		ay, SC = sligh AMPLING DA		AC = almost clear, (o = ciear		
Samp	le ID:	MW-01	(D	Sampling	Flow Rate	0.18		Analytical Laborato	ory:	ESC I	ab Sciences
Sample		172			oth to Water:	3.0		Did Well Dewater?			Ν
	# Containers/Type Preservative Anal					Field Fi	***************************************	Filter Si		MS/MSD	Duplicate ID
	2 X 1 Liter Amb Glass NEAT					yes	6				
-		·				COMMENTS	•				
/July v	MAIDE	CHANGE	= TN	T 12: 01	114 1/2 20/14			D (MIM)	-Mau		
1714 1	MILAN	CHANGE	-, EAS	1 DW	TING VIII	VI UVOK	_ NOTE	D. (CALM <	2		
	-							-			

Ash Creek Associates, Inc.					Well I.D.	MW-	15		Job Number: 1843-00/Task 3		isk 3
	Ash Cred	ek Associ	ates Inc		Client:	Oregon DEC	2		Date:	04/10	/12
		Geotechnical Consult		·•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitsoi	,
					Weather:	CLOUDY	60°F) L	TEWIND SMPP	Time In/Out:	1730	/
						WELL DAT	A				
Well Depth	:	15	. •		Well Diamet	er:		2"	Water Heigh	ıt	11.84'
Depth to W	ater:	3,10	<u>' ما</u>		Screened In	terval:			x Multiplier		0.162
Water Colu	mn Length:	11.8	34'		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:		I		Free Produc	t Thickness:			= Purge Vol	ume	1.92
Water F	leight Multip	oliers (gal)	1-inch	= 0.041	<u> </u>	= 0.162	4-inch = 0.653		1 gallon = 3	.785 liters	5.76
					1	PURGING DA	· · · · · · · · · · · · · · · · · · ·				
Purge Meth	od:		ristaltic Pur	пр	Pump Intake			∑ Feet Below Water		<u>C</u>	omments
Sampling M		Cumulative	Low Flow	Τ	Tubing Type	: 	0.17	" X 0.25" Teflon (De	dicated)		<u> </u>
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1743		1	3.16		+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria
1755	1.92	1,94	4.45	0.16	7.14	12.82	1,192	D.15	46.9	1.56	
1867	1.92	3.84	4.49		7.13	13.41),213	0.13	30.8	0.62	С
1819	1,92				7.13	13.39	1,214	0.12	25.6	0.43	<u>C</u>
1831	831 1.92 7.68 4.55			7,12	13,43	1,216	0.11	20.6	0.48	C	
			larity: VC	= very closs	dy Cl = Clour	ly SC = eligh	tly cloudy	AC = almost clear, (C = clear	:	
		·	iding. VO	vory Gloud	s - S	AMPLING DA	ATA	r.o – annost diedi, t	J - Gloai		
Samp	le ID:	I-WM	5	Sampling l	Flow Rate	0.16	1	Analytical Laborato	ory:	ESC I	Lab Sciences
Sample	Time:	845	2	Final Dep	th to Water:	4.49	,	Did Well Dewater?			N
# Contain	# Containers/Type Preservative Anal					Field Fil		Filter Siz	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	Amb Glass	NEA	\T	F	PCP	yes	no				•
		_				COMMENTS					
						COMMENT	•				
				<u></u>		J					
					· · · · · ·						
									<u> </u>		

			Well I.D.	MW-255	, >		Job Number	: 1843-00/Τε	ask 3		
	Ash Cre	ek Associ	iates Inc		Client:	Oregon DEC	2		Date:	04/11	/12
7	Environmental and	ek Associ Geotechnical Consult	ants	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
					Weather:	CLOUDY	(49°F)	CALM WINDS	Time In/Out:	0805	/
					,	WELL DAT	A				
Well Depth	า:	19	.3'		Well Diamet	er:		2"	Water Heigh	nt	12.97
Depth to W	Vater:	(6.0	ou'		Screened In	terval:			x Multiplier		0.162
Water Colu	umn Length:	12	.97'		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	ume:				Free Produc	t Thickness:			= Purge Vol	ume	2.10
Water	Height Multi	pliers (gal)	1-inch	= 0.041	2-inch	= 0.162	4-	inch = 0.653	1 gallon = 3	.785 liters	6.30
					<u> </u>	PURGING DA					
Purge Met	hod:	Per	istaltic Pur	пр	Pump Intake	Depth:	_2'	Feet Below Water	Surface	c	omments
Sampling I	Method:		Low Flow		Tubing Type	:	0.17	"X 0.25" Teflon (De	dicated)		•
Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рΗ	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
0825	-		le.06'	0.16	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
0820	2.10	2.10	7.47	0.16	7.11	10.71	1,156	0.15	78.4	1.12	C
0851	2.10	4,20	7.57		7.04	10.89	1,138	0.13	62.2	1.16	C
0904	4 2.10 6.30 7.62			7.02	10.87	1,130	0,18	59.8	1.10	C	

											,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
				-							
			lority: VC	- ven den	dv. Cl = Clour	ty SC = sligh	tly cloudy	AC = almost clear, (C = cloar		
			nanty. VO	vory Gou	S	AMPLING DA	ATA	annost Geal, (o – oleai		
Sam	ple ID:	MW-25	3	Sampling	Flow Rate	0.16		Analytical Laborato	ory:	ESC	Lab Sciences
	e Time:	0915			oth to Water:	6.54		Did Well Dewater?			N
	ners/Type	Preser			is/Method	Field Fi	Itered	Filter Si:		MS/MSD	Duplicate ID
					PCP	yes	no	_			_
						COMMENTS	\$				
											,
				······································							
				-		***************************************					
L											

					Well I.D.	MW-9	5		Job Number: 1843-00/Task 3		sk 3
	Ash Cre	ek Associ	ates Inc		Client:	Oregon DEC	2		Date:	04/11/	12
	invironmental and (ek Associ Geotechnical Consult	ants	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitson	7
					Weather:	CLOVDY/	V. LT. RAIN	1(50°F) CALM	Time In/Out:	D920/	
						WELL DAT	A				
Well Depth	•	14.3	<u> </u>		Well Diame	ter:		2"	Water Heigh	nt	7.15
Depth to W	ater:	7.15	5 <u>'</u>		Screened In	terval:			x Multiplier		0.162
Water Colu	mn Length:	7.15	<u> </u>		Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	me:	<u> </u>			Free Produc	t Thickness:			= Purge Vol	ume	1.16
Water	leight Multi	oliers (gal)	1-inch	= 0.041		= 0.162	·	nch = 0.653	1 gallon = 3	.785 liters	3.48
						PURGING DA	TA				
Purge Meth	od:	Per	istaltic Pun	пр	Pump Intake	e Depth:		_Feet Below Water		С	omments
Sampling M	1ethod:	Cumulative	Low Flow		Tubing Type): 	0.17	" X 0.25" Teflon (Dei	dicated) I		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	pН	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
09295	_		7.15	0.16	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
0935	1.16	1.16	7.59	0.16	6.14	9.94	85	4.62	131.1	2.93	C
0942	1.16	2.32	7.73		6.15	9,99	89:	4,50	131.2	2,65	С
0949	49 1.16 3.48 7.80			6,20	10.09	93	4.28	128.4	2,17	C	
			······································								
							ia *				
r				*	,						
			<u>v</u> .								
			 								
	<u> </u>		larity: VC	= very clou	dy, Cl = Cloud	dv. SC = sliah	tly cloudy.	AC = almost clear, 0	C = clear		1
						AMPLING DA					
Samp	le ID:	MW-9	5	Sampling	Flow Rate	0.16		Analytical Laborato	ory:	ESC I	_ab Sciences
, Sample	e Time:	0955		Final Dep	th to Water:	7,49	1	Did Well Dewater?			N
# Contain	# Containers/Type Preservative Analy				is/Method	Field Fi	Itered	Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	Amb Glass	NEA	\T	F	PCP	yes	(no)			41.00	_
						COMMENTS	<u> </u>				
											

					Well I.D.	MW-10	35		Job Number:	Job Number: 1843-00/Task 3	
A.	Ash Cre	ek Associ	ates Inc		Client:	Oregon DEC	2		Date:	04/11/	12
	Invironmental and (ek Associ Georechnical Consult	arts	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
					Weather:	CLOUDY	(50°F)	CALM WINDS	Time In/Out:	1005	
						WELL DAT			r		
Well Depth	:		.0′		Well Diamet	er:		2"	Water Heigh	nt	12.09'
Depth to W	ater:	3.9			Screened In	terval:			x Multiplier		0.162
Water Colu	ımn Length:	12.	09'		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:				Free Produc	t Thickness:			= Purge Vol	ume	1.96
Water	leight Multi	oliers (gal)	1-inch	= 0.041	 	= 0.162	4-inch = 0.653		1 gallon = 3	.785 liters	588
			<u></u>			PURGING DA					
Purge Meth	nod:		istaltic Pur	пр	Pump Intake			_ Feet Below Water		C	omments
Sampling N	/lethod:	Cumulative	Low Flow	1	Tubing Type	: I	0.17	" X 0.25" Teflon (De	dicated)		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1014	-	1	3.91	0.18	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1025	1.96	1.96	5.34	0.18	10.18	11.77	514	0.36	115.4	0.90	C
1036	1.96	3.92	5.39		6.19	11.83	515	0.34	102.5	# .38	С
1047	1.96 5.88 5.41				6.19	11.84	515	0.38	961	1.98	<u>C</u>
							·.···				
									11		
M						*		=-nn=-n	:		
					-						
			larity: VC	= very cloud	dv. Cl = Clour	tv. SC = sligh	tly cloudy	AC = almost clear, 0	C = clear		
				, 5.040		AMPLING DA					
Samp	le ID:	MW-I	35	Sampling I	Flow Rate	0.14		Analytical Laborato	ry:	ESC I	ab Sciences
Sample	Time:	1055	5	Final Dep	th to Water:	4.28	3 '	Did Well Dewater?			N
# Contain					s/Method	Field Fil		Filter Siz	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	2 X 1 Liter Amb Glass NEAT					yes	(no)	**			
						COMMENTS					
						COMMENT					
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Ash Creek Associates, Inc.					Well I.D.	MW-2	05		Job Number: 1843-00/Task 3		
	Ash Cre	ek Associ	ates Inc		Client:	Oregon DEC	2	,	Date:	04/11	/12
** i	hvironmenial and	Geotechnical Consult	ants		Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
			ŕ		Weather:	CLOUDY	(53°F)	CALM	Time In/Out:	1105/	#
		F				WELL DAT	Α				
Well Depth	•	<u>_</u>	4,5		Well Diamet	er:		2"	Water Heigh	nt	10.39
Depth to W	ater:	6.62-2	51=4	.][Screened In	terval:			x Multiplier		0.162
Water Colu	mn Length:	10	.39		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volui	me:		<u> </u>	4	Free Produc	t Thickness:			= Purge Vol	ume	1.68
Water F	leight Multi	pliers (gal)	1-inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3	.785 liters	
						PURGING DA	1				
Purge Meth	od:		istaltic Pun	пр	Pump Intake		3	_ Feet Below Water		C	omments
Sampling M	1	Cumulative	Low Flow		Tubing Type	: I	0.17	" <i>X 0.25" Teflon (De</i> T	dicated)		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	pН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1113	_		6.62	0.16	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1124	1.68	1.68	8.52	0.16	6.12	10.29	128	0.14	-149.3	28.2	<u>C</u>
1135	1.66	3.36	9.56		6.26	10.37	189	0.15	-136.7	23.3	C
1146	1.68	5.04	10.03		6.34	10.71	254	6.49	-123.4	19.6	С
1147	1168			6.36	10,78	274	0.71	-119.2	4.7	C	
1208	1.68	8.40	10.56		6.36	1098	264	0.75	104.3		
						,		:			
				,							
		C	larity: VC	very clou				AC = almost clear, 0	C = clear		
			100	0		AMPLING DA	AIA	A			
Samp		MW-		Sampling		0.16		Analytical Laborato			ab Sciences
	Sample Time: 215 Final D					10.2	*	Did Well Dewater?			<u> </u>
	# Containers/Type Preservative Analy					Field Fi yes	tered (fio	Filter Si:	ze	MS/MSD	Duplicate ID
ZX1 Liter A	amb Glass	NEA	4/	<u> </u>	PCP	,,,,					
						COMMENT	3				

					Well I.D.				Job Number: 1843-00/Task 3		sk 3
	Ash Cree	ek Associ	ates Inc		Client:	Oregon DEC	2		Date:	04/11/	/12
E E	nvironmental and C	Seatechnical Consult	ants	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitson	า
					Weather:	LTRAIN	(54°F	CALM	Time In/Out:	1220	/
						WELL DAT	A				
Well Depth:		15	5.5		Well Diamet	er:		2"	Water Heigh	nt	11.89
Depth to W	ater:	5.88	-2.22	=3.66	Screened In	terval:			x Multiplier		0.162
Water Colu	mn Length:	mv3.	toto 11	.89	Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:				Free Produc	t Thickness:			= Purge Vol	ume	1.43
Water H	łeight Multip	oliers (gal)	1-inch	= 0.041		= 0.162		nch = 0.653	1 gallon = 3	.785 liters	
						PURGING DA		7			
Purge Meth	iod:	Per	istaltic Pun	пр	Pump Intake	Depth:		Feet Below Water	Surface	c	omments
Sampling M		Cumulative	Low Flow	I	Tubing Type	: I	0.17	" X 0.25" Teflon (De 1	dicated)		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	pΗ	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1239	-		5.88	0.17	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1250	1,93	1.93	7.82	0.17	6.00	10.65	151	1.37	-7.7	2.51	C
1301	1.93	3.86	7.80		6.13	10.85	152	0.17	-8.4	1.83	C
1312	1.93	5.79	7.78		6.04	10.93	153	0.09	-2.0	1.72	C
1323	1.93 7.72 7.78			6.06	10.94	153	0.14	+2.3	1.74	С	
								% .			
				J. C. to , 1880;	* ** «*						
							*				
							3				
warre na nasanaanaa		C	larity: VC	= very cloud		dy, SC = sligh		AC = almost clear,	C = clear		
Samp	le ID:	MW-19	15	Sampling		6.17		Analytical Laborato	ory: 🎕	ESC I	.ab Sciences
Sample		1220			th to Water:	7.68	,	Did Well Dewater?			N
	# Containers/Type Preservative Ana					Field Fi		Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	Amb Glass	NEA	\T	F	PCP	yes	(fio)				矿
						COMMENT	s				
1241:	STARTS	PAINING	4 (SHOV	VERS)							
		1ES HUI				1.11.11.11.11.11	,, 				
	RAIN ST										

					Well I.D.	P2-101			Job Number	Number: 1843-00/Task 3		
Ash Creek Associates, Inc. Environmental and Geotechnical Consultants					Client:	Oregon DEQ			Date:	04/11/12		
					Project:	Taylor Lumber GWM			Sampler:	M. Whitson		
					Weather:	IT PAIN (503) CALM		Time In/Out:	Time In/Out: 1340/			
WELL DATA												
Well Depth: 7,5 '			Well Diameter:		2"		Water Height		11.55			
Depth to Water:		3.63-1.68=1.95			Screened Interval:				x Multiplier		0.162	
Water Col	umn Length:	[1,55			Depth to Free Product:				x Casing Volumes		3	
Purge Volume:					Free Product Thickness:				= Purge Volume		1.87	
Water Height Multip		oliers (gal) 1-inch = 0.041		2-inch = 0.162		4-inch = 0.653		1 gallon = 3.785 liters				
PURGING DATA												
Purge Method:		Peristaltic Pump			Pump Intake Depth:		<u> </u>				Comments	
Sampling Method:		Low Flow			Tubing Type:		0.17" X 0.25" Teflon (Ded		dicated)			
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks	
1349			3,63	0.15	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria	
1401	1.87	1.87	8.51	0.15	6.29	10.84	216	0.28	30.8	5,02	٥	
1413	1.87	3,74	8.63	•	6.29	10.99	217	0,21	-21.3	1.65	<u> </u>	
1425	1.87	5.61	3.73		6.29	11.08	217	6.20	-41.0	1.45	С	
1437	1.87	7.48	8.5		6.28	10.92	218	0.21	-39.2	1.35	<u>ر</u>	

			-									
						·				-		
		LC	larity: VC	i = very clou	l dy, Cl = Cloud	l dy, SC = sliah	tly cloudv.	AC = almost clear. (C = clear			
Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear SAMPLING DATA												
Sample ID: PZ-[0]			Sampling Flow Rate		0.15		Analytical Laboratory:		ESC Lab Sciences			
Sample Time:		1945 Final Dep		oth to Water: 6,6		Did Well Dewater?				YES		
# Containers/Type		Preservative Analys		is/Method Field Fi				ze	MS/MSD	Duplicate ID		
2 X 1 Liter Amb Glass		NEAT I		PCP yes		<u>(100)</u>						
	,				COMMENTS							
						COMMENT	3					
							*****			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
					100							
				- "				· · · · · · · · · · · · · · · · · · ·				

				WELL MO	NITORING D	ATA SHE	EET		,	
				Well I.D.	MW-115	,		Job Number	: 1843-00/Ta	isk 3
Ach Co	ek Associ	istec lec		Client:	Oregon DEC	2		Date:	04/11/	12
Environmental and	ek Associ Geotechnical Consult	ians IIIC	••	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	
				Weather:	LT PAIN (50'S F) [ALM]		Time In/Out:	/		
			9)		WELL DAT		7 (21-17-1			
Well Depth:	19	1.25	45.	Well Diame	er:		2".	Water Heigl	nt	16.29
Depth to Water:	7.0	16'		Screened In			-	x Multiplier		0.162
Water Column Length	1,	.29		Depth to Fre				x Casing Vo	dumos	3
		,			t Thickness:			= Purge Vol		2.64
Purge Volume:	nliere (aal)	1 inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3		2.67
Water Height Mult	pilers (gai)	1-111011	- 0.041		PURGING DA		111011 = 0.000	1 gallori = c	7.700 liters	<u> </u>
Puras Mathad:	Per	ristaltic Pur	nn	Pump Intake		2'	Feet Below Water	r Surface		omments
Purge Method:		······································	пр							oninents
Sampling Method:	Cumulative	Low Flow	Duras	Tubing Type): 	0.17	" X 0.25" Teflon (De	(alcaled)		
Time Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1509 -		2.96	0.18	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1524 2.64	2.64	3.97	0.18	7.17	11.65	1,061	0.07	1.0	0.37	C
1539 2.6H	5.28	4.10		7.17	. 11.78	1,063		-7.0	0.36	C
1554 2.64	7.92	4.14		7.17	11.89	1,065	0.04	-13.9	0.3	C
Sample ID:	- C MW-11 1600	5	Sampling Final Dep	Flow Rate oth to Water:	0.18 3.95	ATA .	AC = almost clear, of Analytical Laborator Did Well Dewater?	ory:		Lab Sciences
Sample Time:					tered (no)	Filter Si	ze	MS/MSD	Duplicate ID	
# Containers/Type					yes	رون				_
	Preserv NEA		F	PCP		Eu.				

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					Well I.D.	PW-0	1		Job Number	1843-00/Ta	sk 3
A	Ash Cree	ek Associa	ates Inc		Client:	Oregon DEC			Date:	04/11	/12
	Environmental and C	Geotechnical Consultar	163, 111C.		Project:	Taylor Lumb	er GWM		Sampler:	M. Whitson	n
					Weather:	CLOUDY	(505F) CALM	Time In/Out:	Time In/Out: 1 60/	
		T				WELL DAT	A		T		
Well Depth	n:				Well Diamet	ter:			Water Height		-
Depth to W	/ater:		_		Screened In	terval:		-	x Multiplier		
Water Colu	ımn Length:			V-1000-V-1	Depth to Fre	ee Product:			x Casing Vo	lumes	3
Purge Volu	ıme:		_		Free Produc	t Thickness:			= Purge Vol	ume	_
Water I	Height Multi	pliers (gal)	1-inch	= 0.041	· ····································	= 0.162	L	inch = 0.653	1 gallon = 3	.785 liters	
		T			<u> </u>	PURGING DA	ATA			T	
Purge Meth	nod:		~		Pump Intake	e Depth:				c	omments
Sampling N	/lethod:	Cumulative	Low Flow	<u> </u>	Tubing Type): 		T \		ļ	
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	рН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1619					+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	<- Stabilization Criteria
1629	_		_	_	6,65 M. 6.70	10.85	197	3.45	49.5	4.7	С
1632	-	_	_	_	6,57	10.69	193	3,59	59.8	4.3	C
1635	-	~		_	6.49	10.87	194	3,50	(de,0	3.6	C
			<u> </u>								
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
	•		larity: VC	= very closs	dv. Cl = Clour	ty SC = sligh	tly cloudy	AC = almost clear,	C = clear		
		<u> </u>	icinty. VO	vory clour		AMPLING DA		umost ciear,	O GOOD		
Samp	le ID:	PW-01		Sampling	Flow Rate	UF.		Analytical Laborate	ory:	ESC I	ab Sciences
Sample	e Time:	1640		Final Dep	oth to Water:			Did Well Dewater?	,		_
# Contain	iers/Type	Preserv	ative	Analys	is/Method	Field Fi	tered	Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	Amb Glass	NEA	T	F	PCP	yes	no				*****
						COMMENTS	3				
				****	···	-					
785.											
1											

					Well I.D.	MW-L	05	-	Job Number:	: 1843-00/Τέ	ask 3
	Ach Cre	ek Associ	ates Inc	_	Client:	Oregon DEC	2		Date:	04/11	112
	Environmental and	ek Associ Geotechnical Consult	anis	••	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
					Weather:	CLOUDY	(506)	ALM	Time In/Out:	Time In/Out:	
						WELL DAT					
Well Depth	:	11.	.ゟ'		Well Diamet	ter:	2"		Water Height		8.10
Depth to W	ater:	9.9	0 -1.80	5 = 8.10	Screened Interval:				x Multiplier		0.162
Water Colu	ımn Length:	8	.10		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:				Free Produc	t Thickness:			= Purge Vol	ume	1.31
Water l	leight Multi	pliers (gal)	1-inch	= 0.041	2-inch	= 0.162	4-	inch = 0.653	1 gallon = 3	.785 liters	3.93
						PURGING DA	1				
Purge Meth	nod:	Per	istaltic Pur	пр	Pump Intake	Depth:	<u>Z'</u>	Feet Below Water	Surface	C	omments
Sampling N	/lethod:		Low Flow	T	Tubing Type): 	0.17	"X 0.25" Teflon (De	dicated)		T
Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	pН	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
11059			990'		+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria
1708	1.31	1.3]	10.93	0.14	6.41	9.85	181	2.78	74.0	86.3	SC .
1717	1.31	2.62	11.30		6.47	10.01	185	2.04	65.8	83.5	SC.
1726	1.31	3.93	11.35		6,49	10.03	188	2.16	63.2	-82.7	5C
									:		
				•							AND RELIABLE ALL RESIDENCE THE SHEET OF THE SECOND CONTRACT OF THE S
				•							TO THE RESEARCH AND A SECOND S
			larity: VC	- very dou	dv Cl = Clour	ty SC - diah	tly cloudy	AC = almost clear, (C = clear		
			idinty. VO	- vory Glou		AMPLING D		no – amost deal, t	J - Gloai		
Samp	ole ID:	MW-1	05	Sampling	Flow Rate	0.14	1	Analytical Laborato	ory:	ESCI	_ab Sciences
Sample	e Time:	1730		Final Dep	oth to Water:	11.3	l '	Did Well Dewater?			/ PES
# Contair	ners/Type	Presen	/ative	Analys	is/Method	Field Fi		Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter	Amb Glass	NEA	١ <i>٣</i>	F	PCP	yes	(ño)				
						COMMENT	S				
			**						ζ		
		·					1994				
	±1								WW HOUSE		

					Well I.D.	I.D. MW-245			Job Number: 1843-00/Task 3		
	Ash Cre	ek Associ	lates Inc		Client:	Oregon DEC	2		Date:	04/11/	12
	rivironmental and	ek Associ Geotechnical Consult	ants	•	Project:	Taylor Lumb	er GWM		Sampler:	M. Whitso	n
					Weather:	CLOUDY	CLOUDY (50'S) CALM WIND		Time In/Out:	1740/	/
		,	<u> </u>		1	WELL DAT	Α		T		
Well Depth		רו	.2'		Well Diame	ter:	2"		Water Height		5.98'
Depth to W	ater:	13,0	54-2.30	= 11.24	Screened In	terval:			x Multiplier		0.162
Water Colu	mn Length:	5.	98'		Depth to Fre	e Product:			x Casing Vo	lumes	3
Purge Volu	me:		r · · · · · · · · · · · · · · · · · · ·		Free Produc	t Thickness:			= Purge Vol	ume	0.97
Water H	leight Multi	pliers (gal)	1-inch	= 0.041		= 0.162		inch = 0.653	1 gallon = 3	.785 liters	
						PURGING DA				T	
Purge Meth	od:	Per	istaltic Pun	пр	Pump Intake	e Depth:	2.5	Feet Below Water	Surface	С	omments
Sampling M	lethod:	Cumulative	Low Flow	T	Tubing Type): T	0.17	" X 0.25" Teflon (De	dicated)		
Time	Volume Purged (gallons)	Volume Purged (gallons)	DTW (btc)	Purge Rate (gal/min)	L	Temp (°C)	Cond (μS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
1746	_		13.54	0.10	+/- 0.2	+/- 0.2° C	+/- 5%	+/- 0.5 ppm	+/- 20mV	≤15 NTUs	< Stabilization Criteria
1756	0.97	0.97	14.21	0.10	6.58	10.01	275	0.57	-131.7	8.75	
1806	0.97	1,94	15,07		6.66	10.01	265	0.33	-128,4	3.16	C
1816	0.97	291	15.92		6.70	10.19	274	0.20	-121.0	1,78	_
											:
		C	larity: VC	very cloue		dy, SC = sligh		AC = almost clear, (C = clear		
Samp	le ID:	MW-2	45	Sampling l	Flow Rate	0.10		Analytical Laborato	ory:	ESC I	ab Sciences
Sample	Time:	1925		Final Dep	th to Water:	15,5	3'	Did Well Dewater?			Υ
# Contain	ers/Type	Preserv	ative/	Analys	is/Method	Field Fi		Filter Si	ze	MS/MSD	Duplicate ID
2 X 1 Liter A	Amb Glass	NEA	\T	F	PCP	yes	no				
						COMMENTS	•				



Groundwater Monitoring Work Plan Former Taylor Lumber Site Sheridan, Oregon

Prepared for: Oregon Department of Environmental Quality

April 22, 2011 1843-00





Groundwater Monitoring Work Plan Former Taylor Lumber Site Sheridan, Oregon

Prepared for: **Oregon Department of Environmental Quality**

Stephence Boss

April 22, 2011 1843-00

Stephanie Bosze, R.G. Project Geologist, Ash Creek Associates

EXPIRES: DEC. 31,

Herb Clough, P.E. Principal Engineer, Ash Creek Associates

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- A Health and Safety Plan
- B Sampling and Analysis Plan

1.0 Introduction

This Groundwater Monitoring Work Plan presents the scope of work for groundwater monitoring activities at the former Taylor Lumber and Treating (TLT) Superfund Site located at 22125 SW Rock Creek Road in Yamhill County, Sheridan, Oregon (Site; Figure 1). This Work Plan was prepared for the Oregon Department of Environmental Quality (DEQ) under Task 2 of Task Order No. 57-08-28. This Work Plan covers two annual monitoring events to be conducted in April 2011 and April 2012. The specific scope of work is the same for each event.

1.1 Background

The Site is a wood treating facility that was operated by TLT from 1946 until 2001, when TLT filed for bankruptcy. Pacific Wood Preserving of Oregon (PWPO) entered into a Prospective Purchaser Agreement with the U.S. Environmental Protection Agency (EPA) and purchased the wood treatment portion of the facility. PWPO began operations at the Site in 2002 and is currently treating wood using copper- and borate-based solutions.

A Record of Decision (ROD) for the Site was signed on September 30, 2005 (EPA, 2005). In accordance with the ROD, contaminated soils have been removed from the Site. However, contaminated soils and groundwater remain within the treatment plant area at the Site, enclosed by a soil-bentonite barrier wall. A low-permeability asphalt cap has been placed over the entire area enclosed by the barrier wall, which impedes the infiltration of stormwater into the groundwater located within the barrier wall. Four groundwater extraction wells have been installed within the barrier wall to stimulate an inward hydraulic gradient and prevent water from rising above the cap (EPA, 2010). The ROD identifies pentachlorophenol (PCP) as the contaminant of concern (COC) in Site groundwater (EPA, 2005).

1.2 Objective

The primary objective of the groundwater monitoring program is to confirm that PCP impacted groundwater is not migrating beyond the barrier wall to the Yamhill River to the south or across Rock Creek Road to residential wells.

1.3 Scope of Work

In March 2010, the EPA prepared a Long-Term Groundwater Monitoring and Reporting Plan (EPA Work Plan) for the Site (EPA, 2010). The plan outlined a groundwater monitoring program for the Site including field sampling procedures, quality assurance/quality control (QA/QC) evaluation, sampling handling, and documentation procedures. This Work Plan incorporates the major components of the EPA Work Plan.

The following scope of work, as excerpted from the EPA Work Plan, will accomplish the primary project objective as described in Section 1.2:

- Groundwater samples will be collected for PCP analysis from 19 monitoring wells located outside the barrier wall.
- 2) Groundwater samples will be collected for PCP analysis from residential wells RW-01 and RW-02.
- 3) Water quality parameters will be measured prior to sampling to determine water stability during purging and to qualify the representativeness of the samples.
- 4) Water levels will be measured in each of the above-referenced monitoring wells as well as in extraction wells PW-01 through PW-04, located within the barrier wall.
- 5) For health and safety purposes, organic vapors will be measured in the well headspace prior to monitoring and sampling activities.

These activities are discussed in further detail within this Work Plan. Table 1 lists the groundwater and residential wells that will be gauged and sampled as part of the Site monitoring program. The location of the monitoring, extraction, and residential wells included in the monitoring program are shown on Figure 2.

2.0 Groundwater Monitoring Activities

The groundwater monitoring program will include preparatory activities, collection of groundwater elevation measurements, and collection of groundwater samples for chemical analysis.

2.1 Preparatory Activities

Site Health and Safety Plan. A Site-specific health and safety plan (HASP) has been prepared for the proposed activities. Appendix A includes a copy of the HASP. The HASP was prepared in general accordance with the Occupational Safety and Health Act (OSHA) and the Oregon Administrative Rules (OAR). A copy of the HASP will be maintained on-site during the field activities.

Property Access. PWPO will be contacted a minimum of one week prior to each field event. Prior to entering the site, field staff will also check in at the PWPO main office. The main office is located at 22125 Rock Creek Road, with the primary entrance located off Highway 18B.

Residential Notifications. One monitoring well (MW-9S) and two residential water wells (RW-01 and RW-02) are located off-site, as shown on Figure 2. The owners of these properties will be notified a minimum of one week prior to sampling. Contact information for the residents is provided in the EPA Work Plan (EPA, 2010).

2.2 Documentation of Well Conditions

Prior to sampling, Site conditions will be recorded including temperature, precipitation, wind direction, and any other factors that could affect sample quality. The well monuments will be inspected for signs of damage, and will be noted accordingly in the field notes. The current well locks will be cut off with a bolt cutter and replaced with new locks that utilize a common key. The DEQ project manager and key project personnel will be provided with a copy of the well key.

Prior to sampling, the headspace around each well will be screened for organic vapors using a photoionization detector (PID). Headspace concentrations will be documented in the field notes and any volatiles will be allowed to dissipate before sampling.

2.3 Groundwater Elevation Measurements

Groundwater elevation measurements will be collected in accordance with the EPA Work Plan (EPA, 2010). Wells in which water levels will be measured are listed in Table 1. It is possible there will be a difference in air pressure between the air in the casing and barometric pressure at the time of collecting well measurements. Since such a differential pressure could affect water level results, the well lids and caps will be opened for at least five minutes before making measurements so that the air pressure has adequate time to equilibrate. Water level measurements will be measured with an electronic water level probe and recorded on the appropriate field data sheet with an accuracy of \pm 0.01 foot.

2.4 Groundwater Sampling

Groundwater samples will be collected from the wells listed in Table 1.

Well Purging. Groundwater will be purged before sampling using dedicated Teflon tubing and a peristaltic pump. Field parameters, including temperature, pH, dissolved oxygen, oxidation-reduction potential, specific conductivity, and turbidity will be collected during the purging process using a flow-through cell. Detailed groundwater sampling procedures are described in the sampling and analysis plan (SAP; Appendix B).

Well Sampling. Groundwater sampling will be conducted in accordance with Ash Creek's standard operating procedures (SOPs) which are included in the SAP (Appendix B). Where the SOPs differ from the EPA Work Plan, procedures are typically deferred to those outlined in the EPA Work Plan, and are denoted accordingly in the SAP.

Purging and Sampling of Residential Wells. The locations of the two off-site residential wells are shown on Figure 2. Well RW-01 is located to the west of the Site and will be accessed from the faucet at the pump house that is facing Highway 18. Well RW-02 is located three houses east of Rock Creek Road on

Highway 18. The well is located at the northwest corner of the house. The specific location of the RW-02 and type of sampling port present (i.e., borehole, tap, etc.) will be verified by the property owner.

Water taps will be opened and allowed to run for approximately 10 minutes to clear the system (including a pressure equalizing tank, if present) of residual water in the piping. Following the system purge, a sample will be collected from the tap for measurement of field parameters. The tap will be allowed to run for another 3 minutes before collecting another sample for the measurement of field parameters (pH, electrical conductivity, temperature). This procedure will be repeated until field parameters stabilized to within 10 percent of the previous measurements for three successive measurements. Following completion of "purging" procedures as described above, the groundwater sample will be collected directly from the tap. Sample containers will be provided by the laboratory ready for sample collection, including preservative.

Procedures for labeling and storing the samples are summarized in the SAP (Appendix B).

2.5 Handling of Investigation-Derived Waste

Investigation-derived waste (IDW) will consist of purge water and decontamination water. IDW will be temporarily placed in buckets or drums and will be transported to and disposed of in the drain located to the north of the stormwater treatment system (Figure 2). The Site operations manager will direct field staff to the location of the drain. At a minimum, buckets will be emptied into the drain prior to the end of each field day. Disposable items, such as gloves, paper towels, etc., will be placed in plastic bags after use and deposited in trash receptacles for disposal.

3.0 Analytical Program

Groundwater samples collected from the monitoring wells and residential water wells during both monitoring events will be analyzed for PCP by EPA Method 8270 SIM. Additional information on the analytical program, including sample handling procedures, required analytical reporting limits, preservation requirements, and sample hold times, are summarized in the SAP (Appendix B).

4.0 Quality Assurance and Quality Control

QA/QC procedures will be used throughout this project. The SAP in Appendix B includes the QA plan for this project. This plan includes sampling and custody procedures, QA sampling analyses (such as analysis of duplicates), detection limit goals, laboratory QC, and QA reporting. Groundwater sampling will be conducted in accordance with the QA/QC requirements outlined in the EPA Work Plan (EPA, 2010).

5.0 Annual Reporting

Following each annual monitoring event, a groundwater monitoring report will be prepared and submitted to the DEQ. The quarterly monitoring report will include the following components:

- Summary of field events;
- Summary of problems encountered or deviations from monitoring program;
- Summary table with validated analytical results;
- Summary table with water level measurements;
- Groundwater elevation contour maps; and
- Analytical laboratory testing program and documentation (including a QA review).

The 2011 annual monitoring report will initially be prepared as a draft for review by the DEQ. Upon receipt of DEQ's comments, Ash Creek will issue the report in final form. The 2012 report will incorporate DEQ's comments on the 2011 report, and will be submitted only in final form.

6.0 References

U.S. Environmental Protection Agency (EPA), 2005. *Final Record of Decision Taylor Lumber and Treating Superfund Site, Sheridan, Oregon.* September 30, 2005.

EPA, 2010. Long-term Groundwater Monitoring and Reporting Plan. Taylor Lumber and Treating Superfund Site. March, 2010.

Table 1
Monitoring Program
Taylor Lumber and Treating

Well I.D.	Wells to be Sampled	Water Level Measurments*
Outside Barrier Wall		
MW-1S	Χ	Х
MW-6S	Χ	Χ
MW-6D	Χ	Χ
MW-9S	Χ	Χ
MW-12S	Χ	Χ
MW-13S	Χ	X
MW-15S	Χ	Χ
MW-16S	Χ	Χ
MW-19S	Χ	Χ
MW-20S	Χ	Χ
MW-25S	Χ	Χ
MW-103S	Χ	Χ
PZ-101	Χ	Χ
PZ-102	Χ	Χ
PZ-105	Χ	Χ
South of Highway 18B		
MW-9S	Χ	Χ
MW-10S	Χ	Χ
MW-24S	Χ	Χ
East of Rock Creek Road		
MW-11S	Χ	Χ
Residences**		
RW-01	Χ	
RW-02	Χ	
Extraction Wells Inside Barr	ier Wall	
PW-1	_	Х
PW-02		Χ
PW-03		Χ
PW-04		Χ

- 1. PCP = pentachlorophenol.
- 2. * = Indicates wells in which water level measurements will be collected.
- 3. ** = Residential addresses and contact information are as follows:

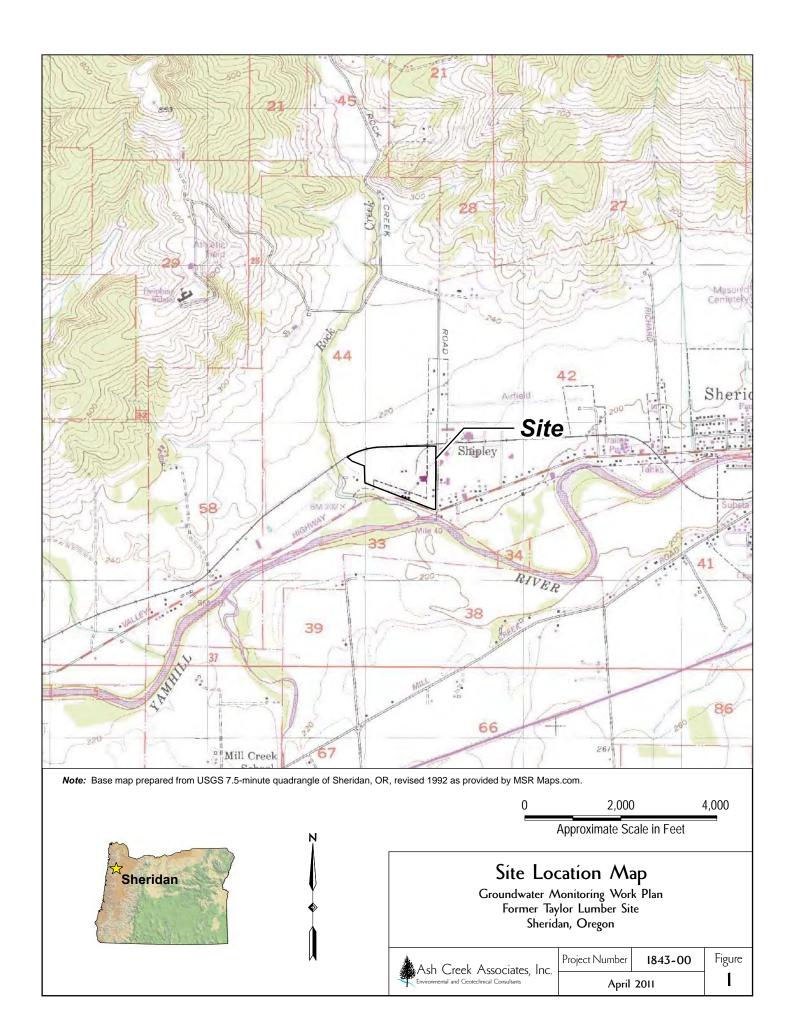
RW- 01: (b) (6)

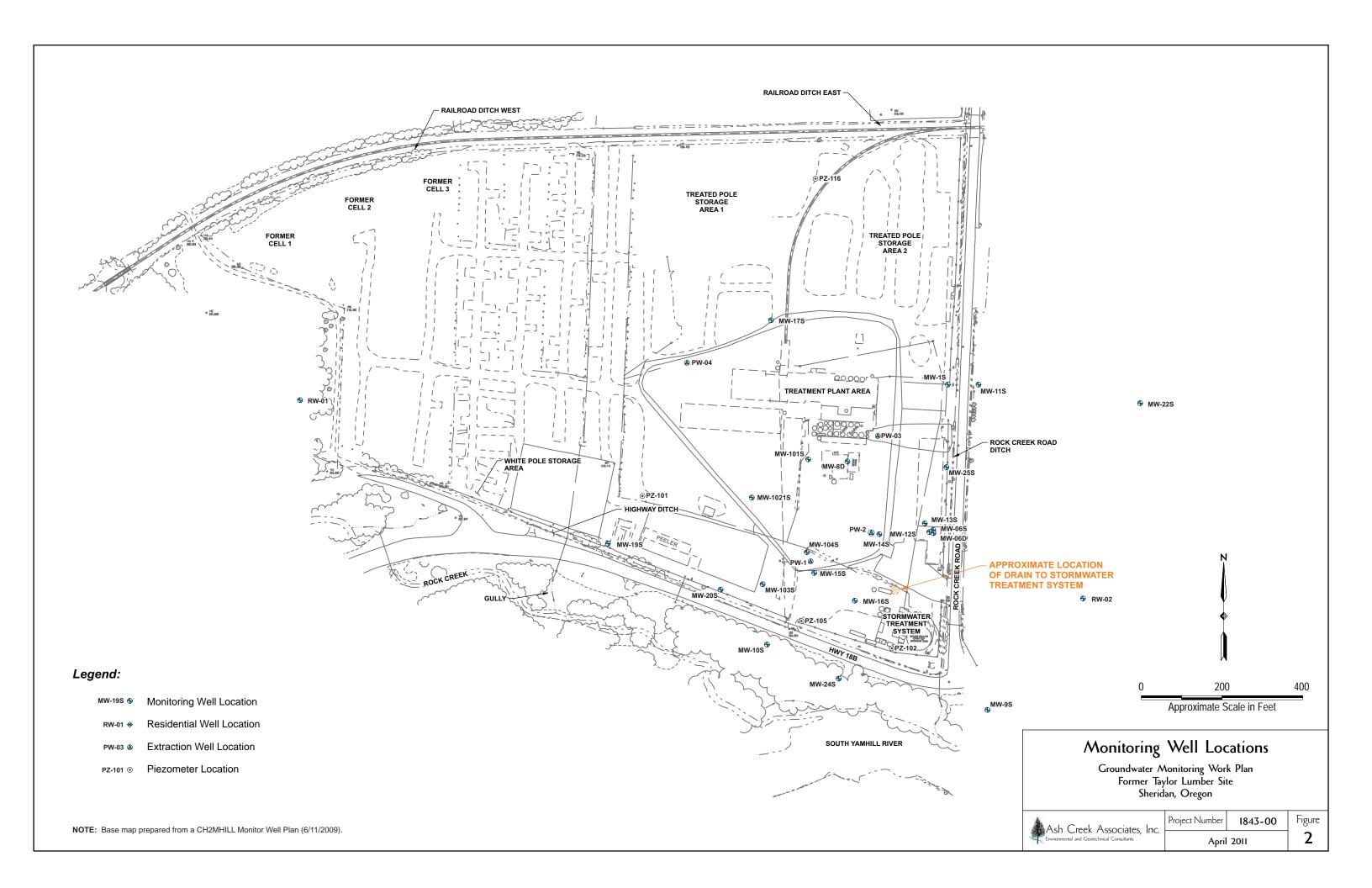
RW-02: (b) (6)

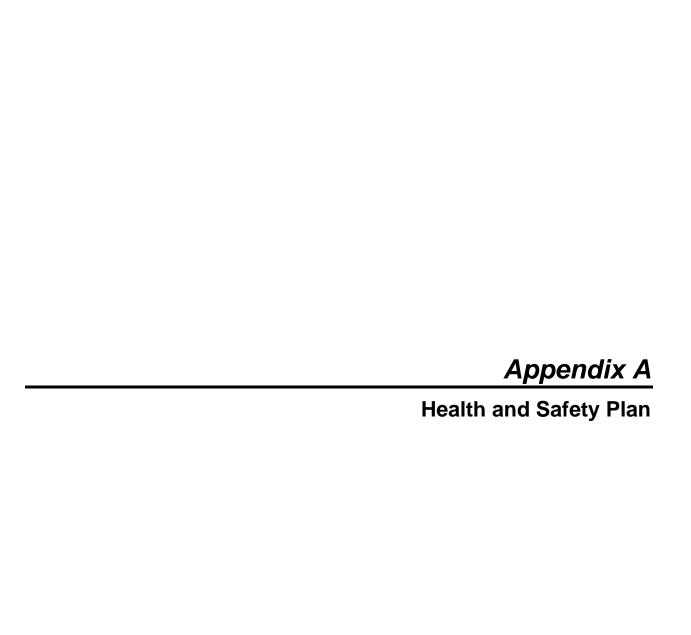
(b) (6)

MW-9S: (b) (6)

MW-11S: Northwest Gazebo - George Gabriel owner - 503-843-0024







Record of Health and Safety Communication

PROJECT NAME: DEQ - Form	mer Taylor Lumber Project							
SITE CONTAMINANTS: Pentachlorophenol								
PPE REQUIREMENTS (check Safety Glasses Safety Boots Hard Hat Gloves:	all that apply):	✓ Clothing : Safety Vest Respiratory Protection : Other :						
The following personnel have reviewed a copy of the Summary Information regarding the Site, and the General Health and Safety Plan (and attachments). By signing below, these personnel indicate that they have read the plan, including all referenced information, and that they understand the requirements which are detailed for this project.								
PRINTED NAME	SIGNATURE	COMPANY	DATE					

1.0 Introduction

This Health and Safety Plan (HASP) includes both Site-specific information (including Site-specific activities, health hazards, route to hospital, and toxicity information) and the general Ash Creek Associates (Ash Creek) Health and Safety Plan (General HASP).

1.1 Emergency Contact Summary

SITE LOCATION	22125 SW Rock Creek Road, Sheridan, OR
NEAREST HOSPITAL	West Valley Hospital 525 Southeast Washington Street Dallas, OR 97338-2834 (See HASP-1) Telephone(503) 842-4444
EMERGENCY RESPONDERS	Police Department 9-1-1 Fire Department 9-1-1 Ambulance 9-1-1
EMERGENCY CONTACTS	Ash Creek Associates (503) 924-4704 National Response Center (800) 424-8802 Oregon Accident Response System (800) 452-0311 Environmental Response Team (503) 283-1150 Poison Control Center (800) 222-1222 Chemtrec (800) 424-9300

In the event of an emergency, call for help as soon as possible. Give the following information:

- WHERE the emergency is (use cross-streets or landmarks)
- PHONE NUMBER you are calling from
- WHAT HAPPENED (type of injury)
- HOW MANY persons need help
- WHAT is being done for the victim(s)
- YOU HANG UP LAST (let the person you called hang up first)

2.0 Corporate Health and Safety Plan

The Ash Creek General HASP, together with the included Site-specific information, cover each of the 11 required plan elements as specified in OSHA 1910.120, and meets all applicable regulatory requirements. The reader is advised to thoroughly review the entire plan.

3.0 Site-Specific Health and Safety Plan

3.1 Site Location and Description

LOCATION: 22125 SW Rock Creek Road, Sheridan, OR

LAND USE OF AREA SURROUNDING FACILITY: Industrial

3.2 Site Activity Summary

SITE ACTIVITIES: Groundwater sampling.

PROPOSED DATE OF ACTIVITY: April 2011 and April 2012.

POTENTIAL SITE CONTAMINANTS: Pentachlorophenol.

POTENTIAL ROUTES OF ENTRY: Potential routes of entry include skin contact with soil and groundwater, incidental ingestion of soil and groundwater, and inhalation of dust and volatiles.

PROTECTIVE MEASURES: Engineering controls, safety glasses, safety boots, hard hat, gloves, protective clothing, and respirators (as necessary).

MONITORING EQUIPMENT: Photoionization detector (PID) with 10.2 eV Lamp; olfactory indications.

3.3 Chain of Command

The chain of command for health and safety in this project involves the following individuals:

CORPORATE HEALTH AND SAFETY MANAGER: Mike Stevens, P.E.

PROJECT MANAGER: Stephanie L. Bosze, R.G..

PROJECT HEALTH AND SAFETY OFFICER: Stephanie L. Bosze, R.G.

FIELD HEALTH AND SAFETY MANAGER: Ian Maguire

3.4 Hazard Analysis and Applicable Safety Procedures

The following work tasks will be accomplished:

1) Groundwater sampling

The associated hazards for the above activities that may be anticipated during this project are discussed in detail below.

Appendix A – Site-Specific Health and Safety Plan

3.4.1 Groundwater Monitoring.

Any sampling will occur under the assumption the media is contaminated and appropriate personnel

protection will be required.

3.4.2 Air Monitoring and Action Levels

PID Monitoring. Air monitoring will be conducted with a PID with 10.2 eV lamp, or equivalent, to measure

organic vapor concentration during Site work activities (the 10.2 eV lamp is specified to allow detection of

halogenated compounds). Background PID measurements will be taken prior to the start of groundwater monitoring to quantify levels associated with the ambient air space in the vicinity of the Site. Subsequent

PID measurements will be taken when well caps are initially removed for sampling. If PID measurements

are elevated relative to the previously measured background levels, then sampling will be deferred to allow

vapors to dissipate. PID measurements shall be consistent with background prior to sampling activities.

Olfactory. If olfactory senses detect any unfamiliar odor, work will stop until an assessment can be made to

determine whether the need exists to upgrade protective measures.

3.5 Chemicals of Concern

Based on Site information gathered to date, the following chemical may be present at the Site:

Pentachlorophenol (PCP)

3.5.1 Toxicity Information

Pertinent toxicological properties of the chemicals of concern are discussed below. This information

generally covers potential toxic effects which may occur from relatively significant acute and/or chronic

exposures, and is not meant to indicate that such effects will occur from the planned Site activities. In general, the chemicals which may be encountered at the Site are not expected to be present at

concentrations that could produce significant exposures. The types of planned work activities should also

limit potential exposures at the Site. Furthermore, appropriate protective and monitoring equipment will be

used, as discussed below, to further minimize any exposures that might occur.

Standards for occupational exposures to these chemicals are included where available. Site exposures are

generally expected to be of short duration and well below the level of any of these exposure limits. These

standards are presented below.

PEL Permissible Exposure Limit (Occupational Safety and Health Act [OSHA])

REL Recommended Exposure Limit (NIOSH)

Appendix A - Site-Specific Health and Safety Plan

IDLH Immediately Dangerous to Life and Health (NIOSH)

TWA Time-Weighted Average (exposure limit for any eight-hour work shift of a 40-hour work week)

STEL Short-Term Exposure Limit (expressed as a 15-minute, time-weighted average, and not to be exceeded at any time during a work day)

C Ceiling Exposure Limit (not to be exceeded at any time during a work day)

The table below lists the exposure limits recommended by OSHA and NIOSH for each of the listed compounds. Respiratory protection will be required if measured concentrations in air exceed the minimum of these exposure limits.

Recommended Exposure Limits

Compound	OSHA PEL	NIOSH REL	IDLH	TWA
	[ppm]	[ppm]	[ppm]	[ppm]
Pentachlorophenol	0.05	0.05	0.25	0.05

Note: ppm = Parts per million.

Pentachlorophenol. Pentachlorophenol is a synthetic substance, made from other chemicals, and does not occur naturally in the environment. It is made by only one company in the United States. At one time, it was one of the most widely used biocides in the United States. Since 1984, the purchase and use of pentachlorophenol has been restricted to certified applicators. It is no longer available to the general public. Application of pentachlorophenol in the home as an herbicide and pesticide accounted for only 3% of its consumption in the 1970s. Before use restrictions, pentachlorophenol was widely used as a wood preservative. It is now used industrially as a wood preservative for power line poles, cross arms, fence posts, and the like. Pure pentachlorophenol exists as colorless crystals. It has a very sharp characteristic phenolic smell when hot but very little odor at room temperature. Most people can begin to smell pentachlorophenol in water at less than 12 parts pentachlorophenol per million parts of water (ppm). Impure pentachlorophenol (the form usually found at hazardous waste sites) is dark gray to brown and exists as dust, beads, or flakes. Pentachlorophenol can be found in two forms: pentachlorophenol itself or as the sodium salt of pentachlorophenol. The sodium salt dissolves easily in water, but pentachlorophenol does not. These two forms have some different physical properties, but are expected to have similar toxic effects. Humans are generally exposed to technical-grade pentachlorophenol, which usually contains such toxic impurities as polychlorinated dibenzo- p-dioxins and dibenzofurans.

The physical and chemical properties of the compound suggest that not much will evaporate into the atmosphere and that most of it will move with water and generally stick to soil particles. Movement of pentachlorophenol in soils depends on the soil's acidity. The compound can be present in fish or other species used for food, as demonstrated by the ongoing food monitoring program of the Food and Drug

Appendix A – Site-Specific Health and Safety Plan

Administration (FDA). In air, soil, and surface water, pentachlorophenol lasts for hours to days. The compound is broken down in soil and surface water by microorganisms, and in air and surface water by sunlight, to other compounds, some of which may be harmful to humans.

Pentachlorophenol easily enters your body through your lungs when you breathe it, through your digestive tract after you eat contaminated food or water, or through your skin. The most significant ways are through breathing and skin contact. After a short exposure period, pentachlorophenol quickly leaves your body (studies in humans show that half the amount taken in is usually gone within 33 hours). It does not seem to build up in the body very much. Most of the pentachlorophenol taken into your body does not break down, but instead leaves in your urine. Much smaller amounts leave in your feces. Only a small amount escapes through your exhaled air. Some of the pentachlorophenol taken into your body is joined with other natural chemicals that make the pentachlorophenol less harmful. The combined product can then leave your body more easily.

Some, but not all, of the harmful effects associated with exposure to pentachlorophenol are due to impurities present in commercial pentachlorophenol. Short exposures to large amounts of pentachlorophenol in the workplace or through the misuse of products that contain it can cause harmful effects on the liver, kidneys, blood, lungs, nervous system, immune system, and gastrointestinal tract. Contact with pentachlorophenol (particularly in the form of a hot vapor) can irritate the skin, eyes, and mouth. If large enough amounts enter the body, heat is produced by the cells in the body, causing an increase in body temperature. The body temperature can increase to dangerous levels, causing injury to various organs and tissues and even death. This effect is the result of exposure to pentachlorophenol itself and not the impurities. The lengths of exposure and the levels that cause harmful effects have not been well defined. Long-term exposure to low levels such as those that occur in the workplace can cause damage to the liver, kidneys, blood, and nervous system. Studies in animals also suggest that the endocrine system and immune system can also be damaged following long-term exposure to low levels of pentachlorophenol. All of these effects get worse as the level of exposure increases. Decreases in the number of newborn animals, harmful effects on reproductive organs of the mothers, decreases in the number of successful pregnancies, and increases in the length of pregnancy were observed in animals exposed to pentachlorophenol while they were pregnant. Harmful effects on reproductive organs of the females were also seen in animals exposed to pentachlorophenol while they were not pregnant. We do not know if pentachlorophenol produces all of the same effects in humans that it causes in animals.

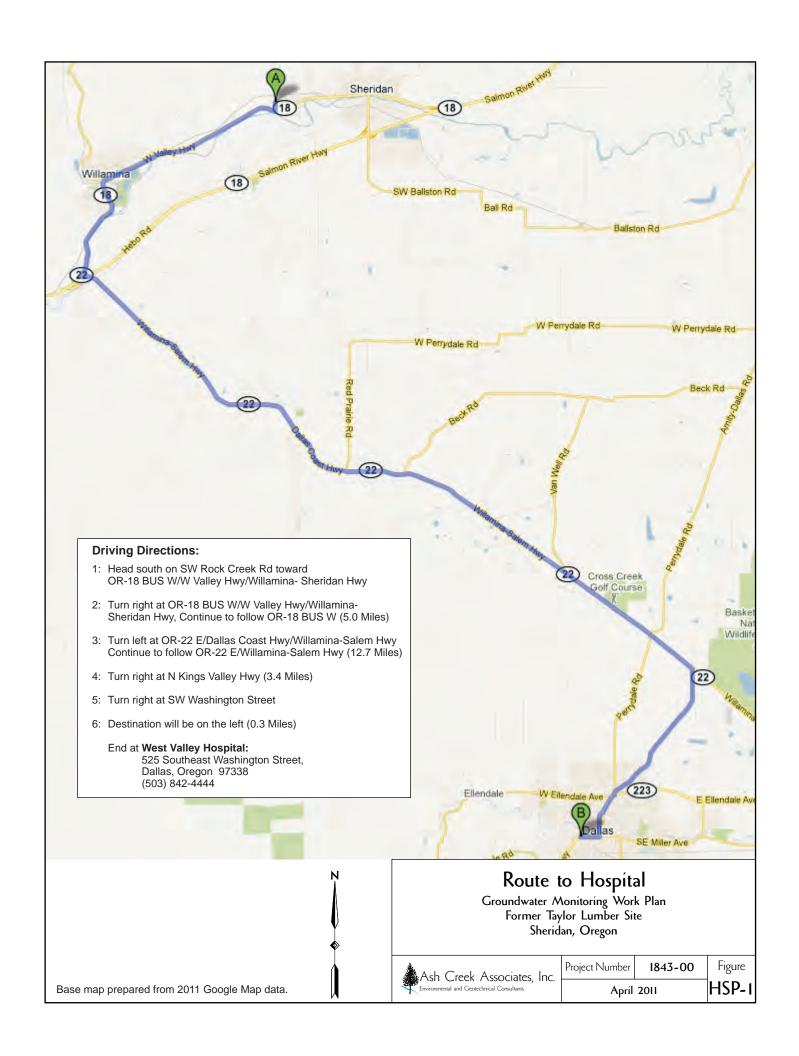
An increased risk of cancer has been shown in some laboratory animals given large amounts of pentachlorophenol orally for a long time. There is weak evidence that pentachlorophenol causes cancer in humans. The International Agency for Research on Cancer (IARC) has determined that pentachlorophenol is possibly carcinogenic to humans, and the EPA has classified pentachlorophenol as a probable human carcinogen.

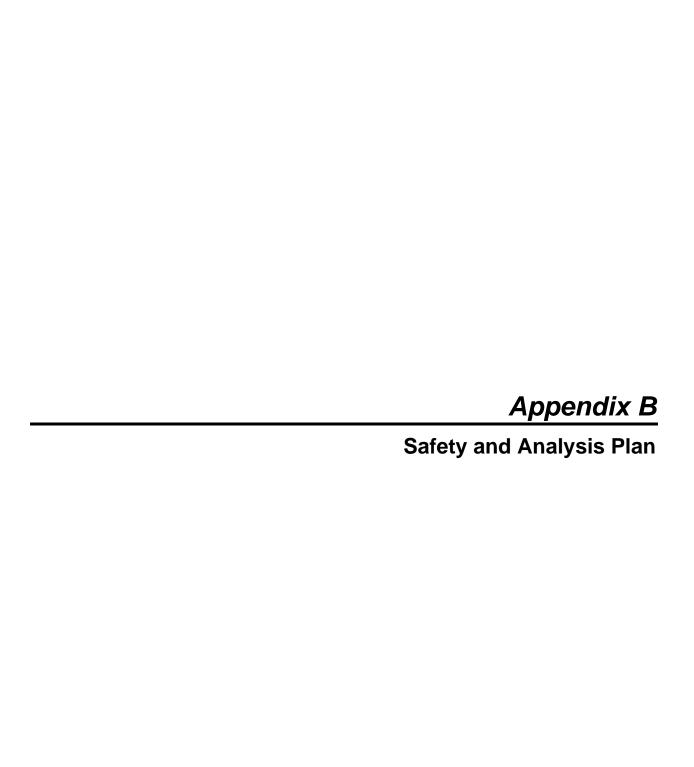
Appendix A – Site-Specific Health and Safety Plan

The federal government has set regulatory standards and guidelines to protect workers from the possible health effects of pentachlorophenol in air. OSHA has set a legally enforceable limit of 0.5 milligrams per cubic meter (mg/m3) in workroom air to protect workers during an 8-hour shift over a 40-hour work week.

Pentachlorophenol and its products can be measured in the blood, urine, and tissues of exposed persons. Because urine and blood samples are easily collected, testing these fluids is the best way to find out whether a person has been exposed. Neither test is usually available at a doctor's office because both require the use of special equipment. Although these tests can prove that a person has been exposed, they cannot be used to tell how severe any health effects might be. Because pentachlorophenol leaves the body fairly quickly, these tests are best for finding exposures that occurred within the last several days. Exposure at hazardous waste sites usually includes exposure to other organic compounds, such as hexachlorobenzene, that could break down into pentachlorophenol. On the other hand, measurement of blood and urine levels for pentachlorophenol and its products in groups of exposed people and non-exposed people is a good way to tell whether exposure to pentachlorophenol or members of the same chemical family occurred.

The federal government has also set regulatory standards and guidelines to protect the public from the possible health effects of pentachlorophenol in drinking water. EPA decided that the amount in the drinking water should not be more than 0.022 milligram per liter (mg/L) and that any release of more than 10 pounds to the environment should be reported. For short-term exposures, EPA decided that drinking water levels should not be more than 1.0 mg/L for 1 day or 0.3 mg/L for 10 days. EPA also estimates that for an average-weight adult, exposure to 0.03 mg/kg/day will probably not cause any non-cancer health effects. EPA is now working to measure the levels of pentachlorophenol found at abandoned waste sites.





1.0 Introduction

This appendix presents the field and sampling procedures and the analytical testing program that will be used to complete the field and analytical work for this project. Quality assurance and quality control (QA/QC) procedures are also discussed in this appendix.

2.0 Field and Sampling Procedures

The scope of work for the Site includes two annual groundwater monitoring events. The field and sampling procedures include the following:

- Preparatory activities;
- Well headspace measurements with a photoionization detector (PID);
- Groundwater elevation measurements;
- Collection of groundwater samples;
- Sample management (i.e., containers, storage, and shipment);
- Decontamination procedures; and
- Handling of investigation-derived waste (IDW).

2.1 Preparatory Activities

Site Health and Safety Plan. A Site-specific health and safety plan (HASP) has been prepared for the proposed activities. Appendix A of the Work Plan includes a copy of the HASP. The HASP was prepared in general accordance with the Occupational Safety and Health Act (OSHA) and the Oregon Administrative Rules (OAR). A copy of the HASP will be maintained on site during the field activities.

Property Access. PWPO will be contacted a minimum of one week prior to each field event. Prior to entering the site, field staff will also check in at the PWPO main office. The main office is located at 22125 Rock Creek Road, with the primary entrance located off Highway 18B.

Residential Notifications. One monitoring well (MW-9S) and two residential water wells (RW-01 and RW-02) are located off site as shown on Figure 2. The owners of these properties will be notified a minimum of one week prior to sampling. Contact information for the residents is provided in the EPA Work Plan (EPA, 2010).

Appendix B - Sampling and Analysis Plan

2.2 PID Headspace Measurements

Prior to sampling, the headspace around each well will be screened for organic vapors using a photoionization detector (PID). Headspace concentrations will be documented in the field notes and any volatiles will be allowed to dissipate before sampling.

2.3 Groundwater Elevation Measurements

Water level measurements will be collected in general accordance with Ash Creek's Standard Operating Procedure (SOP) 2.16 for water level measurement procedures, provided in this appendix. The referenced SOP is in agreement with water level measurement procedures outlined in the EPA Work Plan (EPA, 2010). Water level measurements will be collected from site wells at the beginning of the monitoring event. Well covers and well caps will be opened and the water level will be allowed to equilibrate under atmospheric conditions for at least five minutes before water level measurements are taken. Water level measurements will be recorded in the field notes.

2.4 Collection of Groundwater Samples

Ash Creek will collect groundwater samples from site monitoring wells and off-site water wells annually in accordance with low-flow sampling techniques described in SOP 2.5, included in this appendix. The referenced SOP is in agreement with groundwater sampling procedures outlined in the EPA Work Plan (EPA, 2010). Groundwater samples will be collected using dedicated tubing and a peristaltic pump. A minimum of three casing volumes will be purged prior to sampling. During purging, field parameters will be collected using a flow-through-cell after each purge volume. Purging will be considered complete when water quality parameters including pH, electrical conductivity, and temperature stabilize within 10 percent of the previous measurement and turbidity readings are less than 5 to 15 nephelometric turbidity units (NTU). Sample containers will be provided by the laboratory ready for sample collection.

When sampling residential wells with water taps, the taps will be opened and allowed to run for approximately 10 minutes to clear the system (including a pressure equalizing tank, if present) of residual water in the piping. Following the system purge, a sample will be collected from the tap for measurement of field parameters. The tap will be allowed to run for another three minutes before collecting another sample for the measurement of field parameters (pH, electrical conductivity, temperature). This procedure will be repeated until field parameters stabilized to within 10 percent of the previous measurements for three successive measurements. Following completion of "purging" procedures as described above, the groundwater sample will be collected directly from the tap. Sample containers will be provided by the laboratory ready for sample collection.

Appendix B – Sampling and Analysis Plan

2.5 Sample Management

Containers. Clean sample containers will be provided by the analytical laboratory ready for sample

collection (the container requirements are listed in Table B-1).

Labeling Requirements. A sample label will be affixed to each sample container before sample collection.

All containers will be marked with the project name, sample I.D. (unique I.D. for each sample location), date

and time stamp (military time) of collection, sampler's initials, and the type of analysis.

Sample Storage and Shipment. Soil samples will be stored in a cooler chilled with ice or blue ice to

4 degrees Celsius (°C). The cooler lid will be sealed with chain-of-custody seals. If necessary, the samples will be sent via overnight courier to the analytical laboratory for chemical analysis. Otherwise, Ash Creek

will transport the containers to the laboratory. Chain of custody will be maintained and documented at

all times.

2.6 Decontamination Procedures

Personnel Decontamination. Personnel decontamination procedures depend on the level of protection

specified for a given activity. The HASP (Appendix A) identifies the appropriate level of protection for the type of work and expected field conditions associated with this project. In general, clothing and other

protective equipment can be removed from the investigation area. Field personnel should thoroughly wash

their hands and faces at the end of each day and before taking any work breaks.

Sampling Equipment Decontamination. To prevent cross-contamination between sampling events,

clean, dedicated sampling equipment (e.g., groundwater sampling tubing) will be used for each sampling event and will be discarded after use. Cleaning of non-disposable items (i.e., field meter and water level

probe) will consist of washing in a detergent (Alconox®) solution, rinsing with tap water, followed by a de-ionized (DI) water rinse. Decontamination water will be collected and handled in accordance with

Section 2.9.

2.7 Handling of Investigation-Derived Waste

IDW will consist of purge water and decontamination water. IDW will be temporarily placed in five-gallon

buckets and covered with a lid. Throughout the sampling event, the buckets will be emptied into the facility drain located at the southeast corner of the site for treatment at the on-site stormwater treatment system

(Figure 2 of Work Plan). At a minimum, buckets will be emptied into the drain by the end of each field day.

Disposable items, such as sample tubing, gloves, protective overalls (e.g., Tyvek®), paper towels, etc., will

be placed in plastic bags after use and deposited in trash receptacles for disposal.

3.0 Analytical Testing Program

Analytical laboratory QA/QC procedures are discussed in Section 5 of this appendix.

Table B-2 lists the proposed analytical methods, detection limit goals, and lists the anticipated number of groundwater samples. Samples will be collected and handled using methods described in Section 2 of this appendix. Specific container and storage requirements for samples will be discussed with the analytical laboratory prior to sample collection and will be in accordance with the container requirements presented in Table B-2.

The contaminant of concern (COC) for this project is pentachlorophenol; groundwater samples will be analyzed for pentachlorophenol by EPA Method 8270 SIM.

4.0 Field Quality Assurance Program

Field Chain-of-Custody. A chain-of-custody form will used to record possession of a sample and to document analyses requested. Each time the sample bottles or samples are transferred between individuals, both the sender and receiver sign and date the chain-of-custody form. When a sample shipment is transported to the laboratory, a copy of the chain-of-custody form is included in the transport container (e.g., ice chest).

Field Duplicate Samples. Two field duplicate groundwater samples will be collected during each annual sampling event. Field duplicates will consist of two samples collected sequentially from one sample location to assess data variability. The field duplicates will be analyzed by the same analytical methods used for primary samples. Relative percent differences (RPDs) for field duplicates will be calculated to assess the data precision and accuracy and potential variability caused by sample handling.

Trip Blank. Trip blanks will not be necessary for this investigation as samples will not be analyzed for volatile constituents.

Field Blanks and Equipment Rinse Blanks. Field blanks and equipment rinse blanks are not necessary because the sample tubing is dedicated to each well.

5.0 Quality Assurance and Quality Control

Laboratory QA/QC. The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of data quality indicators, including laboratory-specific detection limits, instrument calibration, calibration verification, blanks, surrogate recoveries, duplicates, matrix spike (MS) recoveries, matrix spike duplicate (MSD) recoveries, blank spike recoveries, and blank spike duplicate recoveries, to evaluate the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of

Appendix B - Sampling and Analysis Plan

the test methods. QA/QC requirements are also detailed in the EPA Work Plan (EPA, 2010). Parameters for determining sensitivity, accuracy, and precision for pentachlorophenol are provided in the EPA Work Plan (Table 4, EPA, 2010).

Field QA/QC. Field duplicates and MS/MSD samples will be submitted to the laboratory as part of the field QA/QC program. The sample, sample duplicate, and the MS/MSD samples will be taken from the same sample location, if possible. A summary of QC samples are provided in Table B-3.

Instrument Calibration. Field instruments, including the water level probe and PID, will be calibrated daily prior to use. PID calibration procedures are summarized in SOP 2.1, provided in this appendix. Instruments will otherwise be calibrated in accordance with the manufacturer's specifications. Additional instructions for field equipment inspection, maintenance, and decontamination are provided in Section 3.0 of the EPA Work Plan (EPA, 2010).

6.0 Documentation

During groundwater monitoring activities at the site, field activities will be documented in the field notebook or on field data sheets. The following information will be documented in the field notebook:

- Daily time of arrival and departure from site
- Project personnel on site
- Equipment calibration records
- Health and safety monitoring records
- Summary of equipment present and equipment used
- Documentation of site visitors, their associations, and purpose of visit

The following information will be recorded on the field data sheets:

- Instrument calibration data
- Water levels
- Purge volumes
- Field measurements
- Sampling information
- IDW volumes
- Shipping information

Table B-1 - Analytical Methods - Sample Container and Preservation Requirements Former Taylor Lumber Project, DEQ Task Order No. 57-08-28 Sheridan, Oregon

Groundwater Analysis	Method	Container	Preservative	Storage Temperature	Holding Time
Pentachlorophenol	EPA 8270 SIM	(2) 1-L Amber Glass per Sample	N/A	4°C	7 days

Notes:

- 1. EPA = U.S. Environmental Protection Agency.
- 2. °C = Degrees Celsius.
- 3. L = Liter.
- 4. N/A = not applicable.
- 5. SIM = Low level analysis.

Table B-2 - Analytical Methods, Anticipated Sample Number, and Reporting Limit Goals Former Taylor Lumber Project, DEQ Task Order No. 57-08-28 Sheridan, Oregon

Analyte	Analytical Method	Anticipated Number of Samples (per event)	Reporting Limit Goal (µg/L)
Pentalchlorophenol	EPA 8270 SIM*	21	1

Notes:

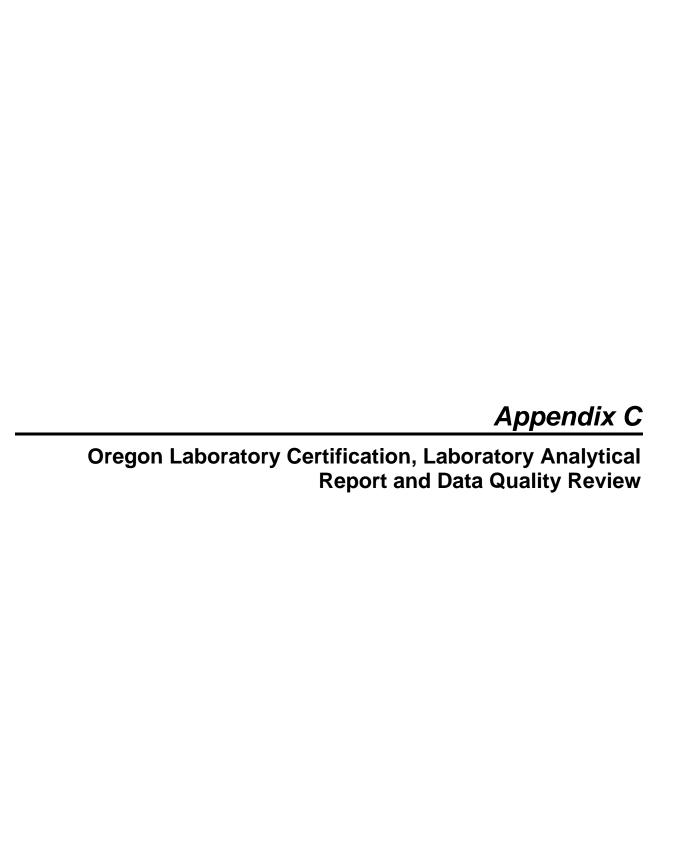
- 1. μ g/L = Micrograms per liter.
- 2. EPA = U.S. Environmental Protection Agency.
- 3. Chain-of-Custody should denote analysis as "SV8270 Acid(PCP Low Level Only)"

Table B-3 - Summary of Quality Control Samples Former Taylor Lumber Project, DEQ Task Order No. 57-08-28 Sheridan, Oregon

Parameter	Method	Field Duplicates	MS/MSD	Field Blanks	Equipment Blanks	Trip Blanks
Pentachlorophenol *	EPA 8270 SIM	2	1/1	0	0	0

Notes:

- 1. EPA = Environmental Protection Agency
- 2. MS/MSD = Matrix Spike/Matrix Spike Duplicate.
- 3. * = Where possible, a sample, sample duplicate, and MS/MSD sample should be taken from the same location.
- 4. For MS/MSD samples, one 1-L Amber bottle is required. If sufficient volume is available, collect 2 1-L amber bottles to ensure against potential breakage.
- 5. For field duplicates, sample volume collected should be doubled (4-1 L Ambers per duplicate well).



Appendix C – Laboratory Analytical Report and Data Quality Review

This appendix documents the results of a quality assurance/quality control (QA/QC) review of the analytical data for samples collected in April 2012 for the Oregon Department of Environmental Quality (DEQ) Taylor Lumber and Treating Superfund site. Groundwater samples were analyzed by ESC Lab Sciences (ESC) of Mt Juliet, Tennessee. Copies of the analytical laboratory reports are included in this appendix.

The QA review included examination and validation of the laboratory summary reports, including:

- Analytical methods;
- Detection limits;
- Sample holding times;
- Surrogates, spikes, and blanks; and
- Sample replicates and other field quality assurance samples.

The QA review did not include a review of raw data.

1.0 Analytical Methods

Groundwater samples were analyzed for pentachlorophenol (PCP) by EPA Method 8270 (Low Level, PCP only).

2.0 Quality Assurance Review

The following criteria were evaluated in the standard data quality review process:

- Holding times;
- Method blanks;
- Surrogate recoveries;
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries; and
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries; and
- Laboratory duplicate and relative percent difference (RPD).

Based on this review, data are considered to be of acceptable quality and are suitable for their intended purposes.

Holding Times. Samples were analyzed within the holding times specified.

Method Blanks. A method – or laboratory – blank is a sample prepared in the laboratory along with the actual samples and analyzed for the same parameters at the same time. It is used to assess if detected



Appendix C – Laboratory Analytical Report and Data Quality Review

contaminants may be the result of contamination of the samples in the laboratory. PCP was not detected in the laboratory method blanks.

Surrogate Recovery. Surrogates are organic compounds that are similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis. Surrogate recoveries for environmental samples are used to evaluate matrix interference on a sample-specific basis. Surrogate recoveries were within control limits for all surrogates associated with PCP analysis.

Laboratory Control Sample and Laboratory Control Sample Duplicate. LCS/LCSD are analyzed by the laboratory to assess the accuracy of the analytical equipment. An LCS/LCSD sample is prepared from an analyte-free matrix that is then spiked with known levels of the constituents of interest (i.e., a standard). The concentrations are measured and the results are compared to the known spiked levels. This comparison is expressed as percent recovery. The RPD between the LCS and LCSD is calculated. The project samples were analyzed in three batches with one LCS and LCSD sample analyzed with each batch. For two of the three batches the LCS was within control limits and the TPD between the LCS and LCSD samples were within acceptable limits. In the third batch, which included project samples MW-1S, MW-15S and MW-24S, the LCS was below acceptable limits and thus the RPD between the LCS and LCSD was also outside of acceptable limits. Samples MW-1S, MW-15S and MW-24S have been flagged with a J3 qualifier indicating the LCS was outside acceptable limits and with a J4 qualifier, indicating the RPD between the LCS and LCSD was outside acceptable limits.

Matrix Spike and Matrix Spike Duplicate Analyses. MS/MSD analysis involves two aliquots of an environmental sample that are spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. These analyses are used to assess the potential for matrix interference with recovery or detection of the constituents of interest and the accuracy of the determination. The RPD between the MS and MSD is calculated. An MS/MSD sample was collected from monitoring well MW-06S in accordance with the work plan, which indicated that the sample, sample duplicate, and MS/MSD samples all be collected from the same sample location. The laboratory inadvertently did not analyze the MS/MSD samples. When the analytical results were reported, and the mistake was noted, the MS/MSD samples were already out of acceptable hold times and could not be analyzed.

To avoid omitting the MS/MSD sample in future laboratory sample batches, the laboratory will be contacted within 48 hours of sample receipt to verify that the MS/MSD samples were included (and analyzed) in the sample batch. If the MS/MSD samples are inadvertently omitted, there will still be ample time to analyze the samples within acceptable hold times for the PCP analysis.

Appendix C – Laboratory Analytical Report and Data Quality Review

Field Duplicate. A field duplicate is a second field sample collected from a selected sample location. Field duplicate samples serve as a check on laboratory quality as well as potential variability of the sample matrix. The field duplicate is analyzed and compared to the first sample to assess the precision of the analytical method. This comparison can be expressed by the RPD between the original and duplicate samples. The field duplicate samples were collected from well MW-6S and MW-16S. RPDs were below 10 percent and therefore within quality control limits.

Reporting Limits. Reporting limits, reported as reported detection limit (RDL) on the laboratory report, were not elevated in the project groundwater samples.

Conclusion. With the exception of samples MW-1S, MW-15S and MW-24S, the associated batch LCS samples indicate that the accuracy of the analysis was acceptable. Surrogate recoveries are another indicator of the accuracy of an analysis. The surrogate sample recoveries associated with samples MW-1S, MW-15S and MW-24S were within acceptable limits, indicating that the accuracy of the analysis was acceptable.

The RPD between the LCS and LCSD samples is an indicator that the precision of the analysis was acceptable. As noted in the section above, the RPD between the LCS/RCSD was out of recovery limits for the QC batch associated with samples MW-1S, MW-15S and MW-24S. The analytical results for pentachlorophenol for the three samples were consistent with the 2011 monitoring event, suggesting that the precision of the analysis was acceptable. Furthermore, field duplicate samples associated with the sample event also indicate that the laboratory results were acceptable. In conclusion, the QA objectives have been met, and the data are of sufficient quality for use in this project.



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Est. 1970

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

Report Summary

Friday April 27, 2012

Report Number: L569897
Samples Received: 04/13/12
Client Project: 1843-00

Description: Taylor Lumber

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jarred Willis , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

 $\overline{\text{Note}}\colon \text{The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.}$

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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Case Narrative

Friday April 27, 2012

Report Number: L569897 Samples Received: 04/13/12 Client Project: 1843-00

Description: Taylor Lumber

Other Comments

The workgroup LCS associated with the 8270PCP analysis on L569897-02, -11, and -21 had good recoveries for the target Acid compounds and surrogate, but the LCSD had low recovery for the Acid targets including the surrogate. The samples also had good recovery for Acid surrogates. The samples are flagged accordingly.



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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-01

Project #: 1843-00

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : PZ-105

Collected By : Michael Whitson Collection Date : 04/10/12 09:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				_				
2-Fluorophenol	31.9			% Rec.		8270 C	04/16/12	1
Phenol-d5	28.8			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	59.4			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	63.2			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	55.7			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	80.1			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.



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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-02

Project #: 1843-00

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-15S

Collected By : Michael Whitson Collection Date : 04/10/12 10:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	15.	0.41	1.0	ug/l	J4J3V9	8270 C	04/18/12	1
Surrogate Recovery				_				
2-Fluorophenol	28.8			% Rec.		8270 C	04/18/12	1
Phenol-d5	23.0			% Rec.		8270 C	04/18/12	1
Nitrobenzene-d5	67.2			% Rec.		8270 C	04/18/12	1
2-Fluorobiphenyl	74.8			% Rec.		8270 C	04/18/12	1
2,4,6-Tribromophenol	22.4			% Rec.		8270 C	04/18/12	1
p-Terphenyl-d14	88.4			% Rec.		8270 C	04/18/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-03

Project #: 1843-00

Date Received : April 13, Description : Taylor Lumber 13, 2012

Sample ID : MW-16S

Collected By : Michael Whitson Collection Date : 04/10/12 11:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	5.8	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				_				
2-Fluorophenol	23.1			% Rec.		8270 C	04/16/12	1
Phenol-d5	24.7			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	68.3			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	74.0			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	36.4			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	89.4			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-04

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-16S DUP

Collected By : Michael Whitson Collection Date : 04/10/12 11:45

Project #: 1843-00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	8.7	0.41	1.0	uq/l		8270 C	04/16/12	1
Surrogate Recovery				3.				
2-Fluorophenol	41.8			% Rec.		8270 C	04/16/12	1
Phenol-d5	35.2			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	81.0			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	88.1			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	75.8			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	105.			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-05

Project #: 1843-00

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : PZ-102

Collected By : Michael Whitson Collection Date : 04/10/12 13:05

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	uq/l		8270 C	04/16/12	1
Surrogate Recovery				- 5,				
2-Fluorophenol	13.2			% Rec.		8270 C	04/16/12	1
Phenol-d5	12.9			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	37.9			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	46.7			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	20.6			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	61.4			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-06

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-13S

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/10/12 14:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	Ŭ	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				_				
2-Fluorophenol	16.2			% Rec.		8270 C	04/16/12	1
Phenol-d5	10.9			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	55.1			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	63.5			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	45.5			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	78.4			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-07

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-12S

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/10/12 15:20

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery								
2-Fluorophenol	28.3			% Rec.		8270 C	04/16/12	1
Phenol-d5	22.0			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	49.4			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	53.7			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	44.7			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	69.6			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP)

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Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

Sample ID

April 27, 2012

ESC Sample # : L569897-08

Date Received : April 13, Description : Taylor Lumber 13, 2012

: MW-06S

Site ID :

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/10/12 16:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	uq/l		8270 C	04/16/12	1
Surrogate Recovery				3.				
2-Fluorophenol	16.9			% Rec.		8270 C	04/16/12	1
Phenol-d5	18.5			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	45.3			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	57.6			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	18.1			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	80.9			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-09

Project #: 1843-00

April 27, 2012

: Date Received April 13, 2012

Taylor Lumber Description

Site ID : MW-06S DUP Sample ID

Collection Date : Collected By Michael Whitson 04/10/12 16:30

Result MDL RDL Units Qualifier Method Date Dil. Acid Extractables Pentachlorophenol Surrogate Recovery U 0.41 1.0 ug/l 8270 C 04/16/12 1 2-Fluorophenol 27.6 % Rec. 8270 C 04/16/12 Phenol-d5 23.3 % Rec. 8270 C 04/16/12 Nitrobenzene-d5 40.2 % Rec. 8270 C 04/16/12 2-Fluorobiphenyl 46.6 % Rec. 8270 C 04/16/12 1 8270 C 2,4,6-Tribromophenol 36.5 % Rec. 04/16/12 1 8270 C 04/16/12 64.9 p-Terphenyl-d14 1 % Rec.

U = ND (Not Detected)

 \mathtt{RDL} = Reported Detection Limit = \mathtt{LOQ} = \mathtt{PQL} = \mathtt{EQL}

 $\mathtt{MDL} = \mathtt{Minimum} \ \mathtt{Detection} \ \mathtt{Limit} = \mathtt{LOD} = \mathtt{SQL}(\mathtt{TRRP})$ Note:

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Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-10

Date Received : April 13, Description : Taylor Lumber 13, 2012

Sample ID MW-06D

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/10/12 17:25

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				J .				
2-Fluorophenol	13.3			% Rec.		8270 C	04/16/12	1
Phenol-d5	14.5			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	53.9			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	62.1			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	29.6			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	85.6			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-11

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID MW-1S

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/10/12 18:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l	J4J3V9	8270 C	04/18/12	1
Surrogate Recovery				_				
2-Fluorophenol	30.7			% Rec.		8270 C	04/18/12	1
Phenol-d5	24.7			% Rec.		8270 C	04/18/12	1
Nitrobenzene-d5	74.7			% Rec.		8270 C	04/18/12	1
2-Fluorobiphenyl	82.0			% Rec.		8270 C	04/18/12	1
2,4,6-Tribromophenol	40.4			% Rec.		8270 C	04/18/12	1
p-Terphenyl-d14	92.0			% Rec.		8270 C	04/18/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

ESC Sample # : L569897-12

Date Received : April 13, Description : Taylor Lumber 13, 2012

Sample ID : MW-25S

Project #: 1843-00

Site ID :

Collected By : Michael Whitson Collection Date : 04/11/12 09:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	200	0.41	1.0	uq/l		8270 C	04/16/12	1
Surrogate Recovery				3.				
2-Fluorophenol	19.8			% Rec.		8270 C	04/16/12	1
Phenol-d5	14.4			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	35.6			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	39.4			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	42.4			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	66.1			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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1

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% Rec.

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Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

p-Terphenyl-d14

ESC Sample # : L569897-13

Project #: 1843-00

April 27, 2012

Site ID :

: Date Received April 13, 2012

Description Taylor Lumber

MW-9S Sample ID

84.6

Collected By Michael Whitson Collection Date : 04/11/12 09:55

Result MDL RDL Units Qualifier Method Date Dil. Acid Extractables Pentachlorophenol Surrogate Recovery U 0.41 1.0 ug/l 8270 C 04/16/12 1 2-Fluorophenol 38.3 % Rec. 8270 C 04/16/12 Phenol-d5 33.2 % Rec. 8270 C 04/16/12 Nitrobenzene-d5 46.7 % Rec. 8270 C 04/16/12 2-Fluorobiphenyl 55.6 % Rec. 8270 C 04/16/12 1 8270 C 2,4,6-Tribromophenol 61.5 % Rec. 04/16/12 1 8270 C 04/16/12

U = ND (Not Detected)

 \mathtt{RDL} = Reported Detection Limit = \mathtt{LOQ} = \mathtt{PQL} = \mathtt{EQL}

 $\mathtt{MDL} = \mathtt{Minimum} \ \mathtt{Detection} \ \mathtt{Limit} = \mathtt{LOD} = \mathtt{SQL}(\mathtt{TRRP})$

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

Project #: 1843-00

April 27, 2012

Site ID :

ESC Sample # : L569897-14

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-103S

Collected By : Michael Whitson Collection Date : 04/11/12 10:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	1.4	0.41	1.0	uq/l		8270 C	04/16/12	1
Surrogate Recovery				- 5,				
2-Fluorophenol	9.60			% Rec.		8270 C	04/16/12	1
Phenol-d5	15.0			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	47.6			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	54.3			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	14.9			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	92.6			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

ESC Sample # : L569897-15

Date Received : April 13, Description : Taylor Lumber 13, 2012

Site ID :

Sample ID : MW-20S

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/11/12 12:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery								
2-Fluorophenol	20.4			% Rec.		8270 C	04/16/12	1
Phenol-d5	15.4			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	46.9			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	57.1			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	54.0			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	77.1			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-16

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : MW-19S

Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/11/12 13:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				_				
2-Fluorophenol	32.9			% Rec.		8270 C	04/16/12	1
Phenol-d5	29.0			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	60.1			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	71.3			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	56.3			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	98.1			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-17

Project #: 1843-00

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

Sample ID : PZ-101

Collected By : Michael Whitson Collection Date : 04/11/12 14:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/19/12	1
Surrogate Recovery				_				
2-Fluorophenol	25.6			% Rec.		8270 C	04/19/12	1
Phenol-d5	22.3			% Rec.		8270 C	04/19/12	1
Nitrobenzene-d5	43.9			% Rec.		8270 C	04/19/12	1
2-Fluorobiphenyl	48.7			% Rec.		8270 C	04/19/12	1
2,4,6-Tribromophenol	48.7			% Rec.		8270 C	04/19/12	1
p-Terphenyl-d14	65.3			% Rec.		8270 C	04/19/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-18

Date Received : April 13, 2012 Description : Taylor Lumber

April 27, 2012

Site ID : Sample ID : MW-11S

Collected By : Michael Whitson Collection Date : 04/11/12 16:00

Project #: 1843-00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/19/12	1
Surrogate Recovery				3.				
2-Fluorophenol	18.7			% Rec.		8270 C	04/19/12	1
Phenol-d5	12.0			% Rec.		8270 C	04/19/12	1
Nitrobenzene-d5	43.8			% Rec.		8270 C	04/19/12	1
2-Fluorobiphenyl	51.1			% Rec.		8270 C	04/19/12	1
2,4,6-Tribromophenol	39.6			% Rec.		8270 C	04/19/12	1
p-Terphenyl-d14	72.6			% Rec.		8270 C	04/19/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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Est. 1970

REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

ESC Sample # : L569897-19

April 27, 2012

Site ID :

Date Received : April 13, 2012 Description : Taylor Lumber

RW-01 Sample ID

Collected By : Michael Whitson Collection Date : 04/11/12 16:40

Project #: 1843-00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/19/12	1
Surrogate Recovery								
2-Fluorophenol	25.8			% Rec.		8270 C	04/19/12	1
Phenol-d5	22.4			% Rec.		8270 C	04/19/12	1
Nitrobenzene-d5	35.0			% Rec.		8270 C	04/19/12	1
2-Fluorobiphenyl	43.6			% Rec.		8270 C	04/19/12	1
2,4,6-Tribromophenol	37.0			% Rec.		8270 C	04/19/12	1
p-Terphenyl-d14	58.7			% Rec.		8270 C	04/19/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

Site ID :

ESC Sample # : L569897-20

Date Received : April 13, Description : Taylor Lumber 13, 2012

: MW-10S

Sample ID Project #: 1843-00

Collected By : Michael Whitson Collection Date : 04/11/12 17:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l		8270 C	04/16/12	1
Surrogate Recovery				3.				
2-Fluorophenol	35.9			% Rec.		8270 C	04/16/12	1
Phenol-d5	29.6			% Rec.		8270 C	04/16/12	1
Nitrobenzene-d5	42.3			% Rec.		8270 C	04/16/12	1
2-Fluorobiphenyl	54.5			% Rec.		8270 C	04/16/12	1
2,4,6-Tribromophenol	62.0			% Rec.		8270 C	04/16/12	1
p-Terphenyl-d14	72.9			% Rec.		8270 C	04/16/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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Est. 1970

REPORT OF ANALYSIS

Stephanie Bosze Oregon Dept. of Env. Quality - ODEQ 3150 NW 229th St., Suite 150 Hillsboro, OR 97124

April 27, 2012

ESC Sample # : L569897-21

Project #: 1843-00

Date Received : April 13, Description : Taylor Lumber 13, 2012

Site ID :

Sample ID : MW-24S

Collected By : Michael Whitson Collection Date : 04/11/12 18:25

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Acid Extractables								
Pentachlorophenol	U	0.41	1.0	ug/l	J4J3V9	8270 C	04/18/12	1
Surrogate Recovery	_			-5,			- , - ,	
2-Fluorophenol	31.0			% Rec.		8270 C	04/18/12	1
Phenol-d5	23.3			% Rec.		8270 C	04/18/12	1
Nitrobenzene-d5	74.3			% Rec.		8270 C	04/18/12	1
2-Fluorobiphenyl	83.8			% Rec.		8270 C	04/18/12	1
2,4,6-Tribromophenol	58.9			% Rec.		8270 C	04/18/12	1
p-Terphenyl-d14	105.			% Rec.		8270 C	04/18/12	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL MDL = Minimum Detection Limit = LOD = SQL(TRRP) Note:

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Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L569897-02	WG588224	SAMP	Pentachlorophenol	R2136534	J4J3V9
L569897-11	WG588224	SAMP	Pentachlorophenol	R2136534	J4J3V9
L569897-21	WG588224	SAMP	Pentachlorophenol	R2136534	J4J3V9

Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning								
Ј3	The associated batch QC was outside the established quality control range for precision. $\ \ \ \ \ \ \ \ \ \ \ \ \ $								
J4	The associated batch QC was outside the established quality control range for accuracy.								
V9	(ESC) - Additional QC Info: Please refer to the Case Narrative provided with the report.								

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples.

 Relates to how close together the results are and is represented by

 Relative Percent Difference.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Oregon Dept. of Env. Quality - ODEQ Stephanie Bosze 3150 NW 229th St., Suite 150

Hillsboro, OR 97124

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L569897

April 27, 2012

Analyte Units Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14 Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14	## Units mg/l % Rec. % Rec.	\$ Rec 81.50 78.75 45.88 57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	16-147 29-127 10-75 17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587690 WG587690 WG587690 WG587974	Date Analyz 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
2.4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl Nitrobenzene-d5 Phenol-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol 2.4,6-Tribromophenol 2.Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol 2.4,6-Tribromophenol 2.4,6-Tribromophenol 2.4,6-Tribromophenol 2.Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Analyte Units Pentachlorophenol 2.4,6-Tribromophenol 2.7,4,6-Tribromophenol 2.Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol 2.4,6-Tribromophenol 2.7,4,6-Tribromophenol 2.Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorobiphenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol 2,4,6-Tribromophenol 2,4,6-Tribromophenol	% Rec.	78.75 45.88 57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	29-127 10-75 17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587690 WG587690 WG587690 WG587974	04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
2.4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 P-Terphenyl-d14 Pentachlorophenol 2.4,6-Tribromophenol 2.4,6-Tribromophenol 2.4,6-Tribromophenol 3.4,6-Tribromophenol	% Rec.	78.75 45.88 57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	29-127 10-75 17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587690 WG587690 WG587690 WG587974	04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
2-Fluorobiphenyl 2-Fluorophenol Witrobenzene-d5 Phenol-d5 2-A,6-Tribromophenol 2-A,6-Tribromophenol 3-Fluorophenol 3-Fluorophe	% Rec.	78.75 45.88 57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	29-127 10-75 17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587690 WG587690 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974	04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 102 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
### Part	<pre>% Rec. % Rec. % Rec. mg/l % Rec. % Rec.</pre>	45.88 57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	10-75 17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587690 WG587690 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974	04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
Witrobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d6 Phenol-d7 Phenol-d8 Phenol-d8 Phenol-d8 Phenol-d8 Phenol-d9	<pre>% Rec. % Rec. % Rec. mg/l % Rec. % Rec.</pre>	57.43 33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	17-119 10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974	04/16/12 02 04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
Phenol-d5 p-Terphenyl-d14 Pentachlorophenol	<pre>% Rec. % Rec. mg/1 % Rec. mg/1 % Rec. % Rec.</pre>	33.47 80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	10-63 40-174 16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587690 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG588224	04/16/12 02 04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
centachlorophenol	% Rec. mg/l % Rec. mg/l % Rec. % Rec. % Rec. % Rec.	80.14 41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	16-147 29-127 10-75 17-119 10-63 40-174	WG587690 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974	04/16/12 02 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Phenol-d6 Pheno	mg/l % Rec.	41.48 48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	16-147 29-127 10-75 17-119 10-63 40-174	WG587974 WG587974 WG587974 WG587974 WG587974 WG587974 WG587974	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16
2.4,6-Tribromophenol 2.Fluorobiphenyl 2.Fluorobiphenyl 2.Fluorobiphenyl 3.Fluorobiphenyl 3.Fluorobiphenyl 3.A,6-Tribromophenol 3.A,4,6-Tribromophenol 3.Fluorobiphenyl 3.Fluorob	% Rec.	48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	29-127 10-75 17-119 10-63 40-174	WG587974 WG587974 WG587974 WG587974 WG587974 WG588224 WG588224	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 18
2-Fluorobiphenyl 2-Fluorophenol ditrobenzene-d5 bhenol-d5 2-Fluorophenol 2-Fluorobiphenyl 3-Fluorobiphenyl 3	<pre>% Rec. % Rec. % Rec. % Rec. % Rec. mg/1 % Rec. % Rec. % Rec. % Rec. % Rec. % Rec.</pre>	48.30 38.79 42.78 30.02 64.02 58.41 64.98 39.79	29-127 10-75 17-119 10-63 40-174	WG587974 WG587974 WG587974 WG587974 WG587974	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 18
### Proposed Company of the Company	% Rec. % Rec. % Rec. % Rec. mg/l % Rec. % Rec. % Rec. % Rec.	38.79 42.78 30.02 64.02 58.41 64.98 39.79	10-75 17-119 10-63 40-174	WG587974 WG587974 WG587974 WG587974 WG588224 WG588224	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 18
### Proposed Company of the Company	% Rec. % Rec. % Rec. mg/l % Rec. % Rec. % Rec. % Rec.	42.78 30.02 64.02 58.41 64.98 39.79	17-119 10-63 40-174	WG587974 WG587974 WG587974 WG587974 WG588224 WG588224	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 18
### Action of the control of the con	% Rec. % Rec. mg/l % Rec. % Rec. % Rec. % Rec.	30.02 64.02 58.41 64.98 39.79	10-63 40-174 16-147	WG587974 WG587974 WG587974 WG588224 WG588224	04/18/12 16 04/18/12 16 04/18/12 16 04/18/12 18
Phenol-d5 p-Terphenyl-d14 Pentachlorophenol < .001 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 3-Terphenyl-d14 Pentachlorophenol 3-Terphenyl-d14 Pentachlorophenol 3-Fluorobiphenyl 2-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorobiphenol 3-Fluorobiphenol 3-Terphenyl-d14 Pentachlorophenol 3-Terphenyl-d14 Pentachlorophenol 3-Terphenyl-d14 Pentachlorophenol 3-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorophenol 3-Fluor	% Rec. % Rec. mg/l % Rec. % Rec. % Rec. % Rec.	58.41 64.98 39.79	10-63 40-174 16-147	WG587974 WG587974 WG588224 WG588224	04/18/12 16 04/18/12 16 04/18/12 18
pentachlorophenol < .001 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Terphenyl-d14	% Rec. mg/l % Rec. % Rec. % Rec. % Rec.	58.41 64.98 39.79	16-147	WG587974 WG588224 WG588224	04/18/12 16
Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-A,4,6-Tribromophenol 3-Fluorobiphenyl 3-Fluorophenol 3-Fluorophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Tribromophenol 3-Fluorobiphenyl 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Tribromophenol	% Rec. % Rec. % Rec. % Rec.	64.98 39.79		WG588224 WG588224	04/18/12 18
2.4,6-Tribromophenol 2.Fluorobiphenyl 2.Fluorophenol 2.Fluorophenol 2.Fluorophenol 2.Fluorophenol 2.Fluorophenol 3.A,4,6-Tribromophenol 3.Fluorophenol	% Rec. % Rec. % Rec. % Rec.	64.98 39.79		WG588224	
2-Fluorobiphenyl 2-Fluorophenol 3/itrobenzene-d5 2-henol-d5 2-henol-d5 2-henol-d6 3-Terphenyl-d14 Analyte Units 2-Pentachlorophenol 3-fluorobiphenyl 2-Fluorobiphenyl 3-Fluorobiphenyl 3-Fluorobiphenyl 3-fluorobiphenyl 3-henol-d5 3-Terphenyl-d14 3-fluorobiphenyl 3-fluorobiphenyl 3-fluorophenol	% Rec. % Rec. % Rec.	64.98 39.79			04/10/10 10
2-Fluorophenol Witrobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d4 Pentachlorophenol Pentachlorophenol Perluorobiphenyl Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Pentachlorophenol Pentachlorophenol Pentachlorophenol Perluorobiphenyl Perluorobiphenyl Perluorobiphenyl Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Perluorophenol Pentachlorophenol	% Rec. % Rec.	39.79	29-127	*********	04/18/17 18
Witrobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d6 Phenol-d6 Phenol-d1 Pentachlorophenol Perluorobiphenyl Perluorophenol Phenol-d5 Phenol-d6 Pentachlorophenol Perluorobiphenyl Perluorobiphenyl Perluorobiphenyl Perluorobiphenyl Perluorobiphenyl Perluorobiphenyl Perluorophenol	% Rec.			WG588224	04/18/12 18
Phenol-d5 p-Terphenyl-d14 Lanalyte Units 1 Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 p-Terphenyl-d14 Pentachlorophenol mg/l 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Fluorophenol			10-75	WG588224	04/18/12 18
Pentachlorophenol Pentachlorophenol Pentachlorophenol Pentachlorophenol Pertuorobiphenyl Pertuorophenol Pitrobenzene-d5 Penenol-d5 Pentachlorophenol Pentachlorophenol Pentachlorophenol Pentachlorophenol Pertuorobiphenyl Pentachlorophenol Pertuorobiphenyl Pertuorophenol Pertuorophenol Pertuorophenol Pertuorophenol Pertuorophenol Pertuorophenol Pertuorophenol Pentachlorophenol		57.82	17-119	WG588224	04/18/12 18
Analyte Units Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorophenol 3-Fluorophenol	% Rec.	28.34	10-63	WG588224	04/18/12 18
Analyte Units Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Mitrobenzene-d5 Phenol-d5 Po-Terphenyl-d14 Pentachlorophenol 2-Fluorobiphenyl 2-Fluorobiphenyl 2-Fluorophenol Mitrobenzene-d5 Po-Terphenyl-d14 Pentachlorophenol Mg/l 2-Fluorophenol Mitrobenzene-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d5 Phenol-d6 Pentachlorophenol Mg/l Pentachlorophenol Mg/l Pentachlorophenol Mg/l	% Rec.	72.64	40-174	WG588224	04/18/12 18
2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 D-Terphenyl-d14 Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 D-Terphenyl-d14 Pentachlorophenol Nitrobenzene-d5 Phenol-d5 D-Terphenyl-d14 Pentachlorophenol Ng/l 2,4,6-Tribromophenol	boratory Con nown Val	Result	% Rec	Limit	Batch
2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 0-Terphenyl-d14 Pentachlorophenol 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 0-Terphenyl-d14 Pentachlorophenol Nitrobenzene-d5 Phenol-d5 0-Terphenyl-d14 Pentachlorophenol Ng/l	01	0.00584	58.4	10-128	WG587
2-Fluorobiphenyl 2-Fluorophenol 3itrobenzene-d5 3chenol-d5 3chenol-d5 3chenol-d6 3chenolorophenol			87.28	16-147	WG587
2-Fluorophenol Ditrobenzene-d5 Dhenol-d5 D-Terphenyl-d14 Dentachlorophenol Dentachlorophenol Dentachlorophenol Dentachlorophenol Dentachlorophenol Dentachlorophenol Dentachlorophenol Ditrobenzene-d5 Denol-d5 Dentachlorophenol De			72.86	29-127	WG587
### Ititrobenzene-d5 ### Ititrobenzene-d5 #### Ititrobenzene-d5 #### Ititrobenzene-d1 #### Ititrobenzene-d5 ##### Ititrobenzene-d5 ####################################			36.48	10-75	WG587
Phenol-d5 p-Terphenyl-d14 Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorophenol 2-Fluorophenol 3-Fluorophenol 3-Fluorophenol 4-Fluorophenol 5-Fluorophenol 6-Fluorophenol 6-Fluorophenol 6-Fluorophenol 7-Fluorophenol 8-7-Fluorophenol 8-7-Fluorophenol 8-7-Fluorophenol			56.39	17-119	WG587
p-Terphenyl-d14 Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3itrobenzene-d5 3henol-d5 2-Terphenyl-d14 Pentachlorophenol mg/l 2,4,6-Tribromophenol			29.87	10-63	WG587
Pentachlorophenol mg/l 2,4,6-Tribromophenol 2-Fluorobiphenyl 2-Fluorophenol 3-Fluorophenol 3-Fluorophenol 3-Frephenyl-d14 3-Frephenyl-d14 3-Frephenyl-d14 3-Frephenyl-d14 3-Frephenyl-d14 3-Frephenyl-d14			73.00	40-174	WG587
,4,6-Tribromophenol -Fluorobiphenyl -Fluorophenol ditrobenzene-d5 henol-d5 -Terphenyl-d14 entachlorophenol mg/l ,4,6-Tribromophenol					
-Fluorobiphenyl -Fluorophenol ditrobenzene-d5 dhenol-d5 -Terphenyl-d14 entachlorophenol mg/l ,4,6-Tribromophenol	01	0.00230	23.0	10-128	WG587
e-Fluorophenol ditrobenzene-d5 henol-d5 b-Terphenyl-d14 entachlorophenol mg/l			37.18	16-147	WG587
<pre>itrobenzene-d5 chenol-d5 chenol-d5 chenol-d14 centachlorophenol mg/l c,4,6-Tribromophenol</pre>			37.09	29-127	WG587
Phenol-d5 p-Terphenyl-d14 Pentachlorophenol mg/l			28.94	10-75	WG587
entachlorophenol mg/l			35.26	17-119	WG587
Pentachlorophenol mg/l			23.42	10-63	WG587
2,4,6-Tribromophenol			50.20	40-174	WG587
2,4,6-Tribromophenol	01	0.00574	57.4	10-128	WG588
	υ ±	0.003/4	80.85	16-147	WG588
(=FIIIOTODIDDENVI					
			73.60	29-127	WG588
-Fluorophenol			43.11	10-75	WG588
Nitrobenzene-d5			67.25	17-119	WG588
Phenol-d5			31.15	10-63	WG588
p-Terphenyl-d14			84.00	40-174	WG588
		Sample Duplicate		777	ude pur 1
Analyte Units Resul	_	%Rec	Limit	RPD Lir	mit Batch

chlorophenol mg/l 0.00595 0.00584 59.0 10-128 1.82 40 WG587690 * Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



Hillsboro, OR 97124

Oregon Dept. of Env. Quality - ODEQ Stephanie Bosze 3150 NW 229th St., Suite 150

Quality Assurance Report Level II

L569897

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 27, 2012

				mple Duplicate				
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
2,4,6-Tribromophenol				88.48	16-147			
2-Fluorobiphenyl				79.83	29-127			
2-Fluorophenol				43.79	10-75			
Nitrobenzene-d5				63.45	17-119			
Phenol-d5				31.98	10-63			
p-Terphenyl-d14				82.32	40-174			
Pentachlorophenol	mg/l	0.00255	0.00230	26.0	10-128	10.2	40	WG5879
2,4,6-Tribromophenol				49.84	16-147			WG5879
2-Fluorobiphenyl				48.06	29-127			WG5879
2-Fluorophenol				33.11	10-75			WG5879
Nitrobenzene-d5				44.96	17-119			WG5879
Phenol-d5				25.77	10-63			WG5879
p-Terphenyl-d14				59.76	40-174			WG5879
Pentachlorophenol	mg/l	0	0.00574	0*	10-128	200.*	40	WG5882
2,4,6-Tribromophenol	g/ ±	0	0.00371	1.720*	16-147	200.	10	WG5882
2-Fluorobiphenyl				74.55	29-127			WG5882
2-Fluorophenol				1.550*	10-75			WG5882
Vitrobenzene-d5				68.77	17-119			WG5882
Phenol-d5				9.880*	10-63			WG5882
p-Terphenyl-d14				87.71	40-174			WG5882

Batch number /Run number / Sample number cross reference

WG587690: R2123373: L569897-01 03 04 05 06 07 08 09 10 12 13 14 15 16 20

WG587974: R2130374: L569897-17 18 19 WG588224: R2136534: L569897-02 11 21

^{* *} Calculations are performed prior to rounding of reported values.

^{*} Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



Oregon Dept. of Env. Quality - ODEQ Stephanie Bosze 3150 NW 229th St., Suite 150

Hillsboro, OR 97124

Quality Assurance Report Level II

1.569897

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 27, 2012

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate — is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

OREGONDEQ - State of Oregon Sample Chain of Custody - OREGONDEQ

Page 10FZ

Agency, Authorized Purchas Ash Creek Associates for Of		8		Contract Laboratory Name:				ion Criteria: y (if TAT < 48 hrs)	Turn Around Time: 10 days (std.)
Send Lab Report To: Stephanie Bosze - Ash Creek Address: 3015 1st Aunu Portland OK, 97201 Tel. #: 503-924-4704 x125 E-mail: 560522 2 a sh creek a sociates. com Project Name:				Address: >	Delia (act # 8903 Chadwick ODE Sight Aunu OR, 97104 Sample Prese	Prior wo	rk on same project r anticipated analyses) bs disqualified or unable m requested services	5 days 72 hours
Project Name: Project #: 1843-00									
The state of the s	whitson	,				Requested An	alyses		
Sample ID#	Collection Date/Time	Matrix	Number of Contain -ers	8270					Comments
PZ-105	09-10-13	ow	2	X					
mw-155	0945	GW	2	X					
mw-165	4-10-12	600	2	X					
MW-165 DUP	4-10-12	6W	2	X					
mw-165 M5	4-10-12	GW	2	X					
MW-165 MSD	4-10-12	GW	2	X					
PZ-102	4-16-12	6 W	2	x					
MW-135	470-12	6W	2	x					
mw-125	1520	GW	2	X					
mw-065	4-10-12	6 W		X					
mw-obs DUP	1630	GW	2	1					
mw-06D	1725	Gw	2	X					
Notes:									
Relinquished By:	ned By: Agency/Ager			(reek	Re	eceived By:		Agency/Ag	ent:
Signature:				2 150	o Sig	gnature:		Time & Da	te:
Relinquished By:			cy/Agent:			ceived By:		Agency/Ag	ent:
Signature: Time & Date:				Sig	gnature:		Time & Da	te:	

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 1. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

OREGONDEQ - State of Oregon Sample Chain of Custody - OREGONDEQ

Page ZoFZ

Agency, Authorized Purchaser or Agent: Ash Creek Associates for ODEQ Send Lab Report To: Stephanie Bosze - Ash (reck Address: 3015 Ast Alence Portions OL, 97241 Tel. #: 503 - 924 - 4704 +125 E-mail: 56052e @ ash (reck associates - com Project Name: Project #: 1843-00					act Laborat	ory Nan	ne:	The state of the s	ection Criteria: mity (if TAT < 48 hrs)	Turn Around Time: 10 days (std.)
						lia Chad w 6+	wick-ODE h Aunu 9 2204	Cost Other to per	work on same project (for anticipated analys) labs disqualified or un form requested service gency work	es) 72 hours
						Sai	mple Preser	vative		
Sampler Name:						Re	guested Ana	lyses		
Sample ID# Collection Matrix Number of Contain -ers			20						Comments	
mw-75	470-12	Gu	2	X						
mw-255	4-11-12		2	X						
mw-95	4-11-12	GW	2	X						
mw-1035	4-11-12	6 W	2	X						
mw-205	1215	GW	Z	X						
mw-195	1230	GW	2	X						
PZ-101	14432	aw	2	X						
MW-115	4-11-12	6W	2	X						
RW-01	4-11-12 1600 4-11-12 1648	GU	2	X						
mw-105	1930	600	2	X					17-1	
mw-245	1252	GW	2	Y						
Notes:										
Relinquished By: Whiten Agency/Agent:				uC.		Receive	ed By:		Agen	cy/Agent:
Signature:			& Date		00	Signatu	re:		Time	& Date:
Relinquished By:		_	cy/Agent			Receive	ed By:		Agen	cy/Agent:
Signature: Time & Date:					Signatu	re:		Time	& Date:	

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 1]. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

Version: 4/4/2008

		Billing	g information	n:			A	naiysisi	Contail	ner/Pr	eserva	tive	Chain of Custody
Oregon Dept. of Er							,= 				B202 - ne 1 of 3		
ODEO 3150 NW 229th St., St Hillsboro,OR 97124	Delia Chadwick - ODEQ 811 SW Sixth Avenue Portland, OR 97204										*ESC		
Report to: Stephanie Bosze		Ema		osze@ashcr	eekassocis	ates c							12065 Lebanon Road Mt. Juliet, TN 37122
roject Description: Taylor Lumber		Ven	City/State	7.5					8 5			5	Phone: (800) 767-5859
thone: (503) 693-5745 AX: (503) 373-1626	Client Project #: 1843-00			Lab Project # OREGONDEQ-TAYLORLU						1			Phone: (615) 758-5858 Fax: (615) 758-5859
collected by (print):	Site/Facility ID#:	***	P.O.#:										
Collected by (signature): mmediately acked on Ice N Y X	Rush? (La Same Day Next Day Two Day Three Day		200% 100% 50%	Date Resul	lo X yes	No. of Cntrs	8270PCP 100ml Amb NoPres					et.	Acctnum: OREGONDEO (lab use only) Template/Prelogin T70883/ P387763 Cooler #: 313012 AL Shipped Via: FedEX Ground
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Chas	827				11		Remarks/Contaminant Sample # (lab only)
PZ-105		GW	•	04-10	0945	2	X				9		L569897-01
MW-155		GW		04-10	1045	2	X				8		o.
MW-165		GW	1200	04-10	1145	2	X		0				63
MW-165 DUP		GW		04-10	1145	2	X						OV
MW-165 MS		GW		04-10	1145	2	X		:40				03 04
MW-165 MSD		GW		04-10	1145	2	X		Å.				03 04
PZ-102		GW		04-10	1305	2	X						US
MW-135		GW	1960	04-10	1415	2	X						36
MW-125		GW		04-10	1520	2	X				1,		07
Matrix: SS - Soil GW - Groundwater W	W - WasteWater DW -	Drinking Water	OT - Othe	r	. 10							рН	Temp
Remarks: Reporting PCP only. PC	CP needed at 1 ug/l.	9										Flow	Other
							*		~	n .	.0 5	.01 -	
Relinquilingd by Signature	Date:	Time:	Receiv	red by: (Signati	ıre)				ラル Sam	ples/re	0/ turned	<i>0787</i> via: ⊔UF	PS Condition: (lab use only)
//www.x/vo	04-12	1500		· .	4				₫ i	FedEx	□Cour	ier 🔲	- a, ms
Relinquished by: (Signature)	Date:	Time:		ved by: (Sfgnatu	4				Temp			Sottles Rece	eived: Y COC Seal Intact: Y Y N NA
Relinquished by (Signature)	Date:	Time:	Receive	d for lab by: (Si	gnaturs)	_			Date	:		5900	pH Checked: NCF:

		Bi	ling informatio	n'			Ana	lysis/Conta	ainer/Pres	ervative		Chain of Custody
Oregon Dept. of Env. Quality -			Dining Provincetors.					3				Page 2 of 3
ODEO 3150 NW 229th St., Suite 150 Hillsboro,OR 97124			Delia Chadwick - ODEQ 811 SW Sixth Avenue Portland,OR 97204									*ESC
Report to: Stephanie Bosze			mait SB	osze@ashcr	eekassoci	ates.c					İ	12065 Lebanon Road Mt. Juliet, TN 37122
roject escription: Taylor Lumber	3.		City/Stat Collecte	SHERIDA	N, ORE	GON	s					Phone: (800) 767-5859 Phone: (615) 758-5858
thone (503) 693-5745 AX: (503) 373-1626	Client Project #: Lab			roject # EGONDEQ-			Amb NoPres			1		Fax: (615) 758-5859
collected by (print): MICHAEL WHITSON collected by (signature): Award Add	MICHAEL WHITSON cled by/(signafue): A Most Day Next Day		200%	Date Results Needed			100ml Aml	88 80				Acctnum OREGONDE (lab use only) Template/Prelogin T70883/ P387763
nmediately Two Day Three Day			50%		Email? _No X Yes FAX? _No _Yes		PCP) h _v			Cooler# 3 39112 AR Shipped Via: FedEX Ground
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Cntrs	82,		ľ			Remarks/Contaminant Sample # (lab only)
MW-065		GW		04-10	1630	2	X					1569897-08
MW-065 DUP		GW		04-10	1630	2	X					09
MW-06 D		GW		04-10	1725	2	X		7.			10
Mw-15		GW		04-10	1845	2	X					1
MW-255		GW		04-11	0915	2	X		7.00			17
MW-95		GW		04-11	0955	2	X		- K			13
MW-1035		GW		04-11	1055	2	X					
MW-205		GW		04-11	1215	2	X					15
MW-195		GW		04-11	1330	2	X					16
MW-195 Matrix: SS - Soil GW - Groundwater W Remarks: Reporting PCP only, PC)W - Drinking Wa	ater OT - Other	04-11		2				•		TempOther

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: LIUPS Condition: (lab use only)
1/m/1/1/10	04-12	1500	夏12.4	☑ FedEx □Courier □
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Temp: Bottles Received:
				5.8 Y/ + 1418 COC Seal Intact: Y N N.
Relinquished by (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time: pH Checked: NCF:
			E will ver	4-12-10 0900

		F	Billing informat	ion	**		L Ár	nalysis/Cor	tainer/Pres	erva	tive	Chain of Custody
Oregon Dept. of En	v. Qualit		J				i i					Page <u>3</u> of <u>3</u>
ODEO 3150 NW 229th St., Su	St., Suite 150			adwick - OD Sixth Avenu			100	27		-4		
Hillsboro,OR 97124			Portland,	OR 97204								XESC
Report to: Stephanie Bosze		Emait S1	Bosze@ashc	-	36				L-A-B S-C-I-E-N-C-E-S 12065 Lebanon Road Mt Juliet, TN 37122			
Project Description: Taylor Lumber	· · · · · · · · · · · · · · · · · · ·	1	City/St		Amb NoPres					Phone: (800) 767-5859 Phone: (615) 758-5858		
Phone: (503) 693-5745 FAX: (503) 373-1626				Lab Project # OREGONDEQ-TAYLORLU								Fax: (615) 758-5859
Collected by (print): MICHAEL WHITSON	Site/Facility ID#	ł	P.O.#									
Collected by (signature): Immediately Packed on Ice N _ Y X	Same Day	(Lab MUST E	200%	Date Results Needed			100ml					Acctnum OREGONDEO (ab use only) Template/Prelogin T70883/ P38776
	Two Day	Two Day Three Day		Email?NoYes FAX?NoYes		No. of Cntrs	8270PCP					Shipped Via: FedEX Ground
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Citas	82.	9.59			774. 1.35.	Remarks/Contaminant Sample # (lab only)
PZ-101		GW			1445	2	X				1	1561817-17
MW-115		GW			1600	2.	X			1		15
RW-01		GW			1640	2.	X		1 1			15
-DUPLICATE -		GW				2-	X			+		mu 04.12.12
DUPLICATE		-GW-				2-	X			1		MW 04-12-12
-MS/MSD		GW			-	2	X		1_1	7	+	MW 04-12-12
MW-105		GW			1730	2	X			\top		20
MW-245		9W			1825	2	X					71
*Matrix: SS - Soil GW - Groundwater W Remarks: Reporting PCP only. PC		1773	Vater OT - Oti	her							pH	Temp
Relinguished by: (Signature) Relinguished by: (Signature)	Date:	12 150	Rec	eived by: (Signa	ture)		2	E	Samples retu FedEx C emp:	rned]Cour	via: LIUP:	COC Seal Intact: Y_N_NA
Relinquished by (Signature)	Dale:	Time	Recei	ved for lab by: (S	Signature)	1	-		Date: /-13-1		090	pH Checked: NCF:



OREGON

Environmental Laboratory Accreditation Program



NELAP Recognized

Environmental Science Corporation TN200002

12065 Lebanon Road

Mt. Juliet.TN 37122

IS GRANTED APPROVAL BY ORLLAP UNDER THE 2009 TNI STANDARDS, TO PERFORM ANALYSES ON ENVIRONMENTAL SAMPLES IN MATRICES AS LISTED BELOW:

Air	Drinking Wa	Non Potal Iter Water	le Solids and Chem. Waste	Tissue
Chemistry	Chemistry	Chemistry	Chemistry	T C
		Toxicity Testing		

AND AS RECORDED IN THE LIST OF APPROVED ANALYTES. METHODS, ANALYTICAL TECHNIQUES, AND FIELDS OF TESTING ISSUED CONCURRENTLY WITH THIS CERTIFICATE AND REVISED AS NECESSARY.

ACCREDITED STATUS DEPENDS ON SUCCESSFUL ONGOING PARTICIPATION IN THE PROGRAM AND CONTINUED COMPLIANCE WITH THE STANDARDS.

CUSTOMERS ARE URGED TO VERIFY THE LABORATORY'S CURRENT ACCREDITATION STATUS IN OREGON.

Gary K. Ward, MS

Oregon State Public Health Laboratory

ORELAP Administrator

3150 NW. 229th Ave, Suite 100

Hillsboro, OR 97124

ISSUE DATE: 01/16/2012

EXPIRATION DATE: 01/15/2013

Certificate No: TN200002 - 008





Oregon

Environmental Laboratory Accreditation Program



Department of Agriculture, Laboratory Division Department of Environmental Quality, Laboratory Division Oregon Health Authority, Public Health Division

NELAP Recognized

ORELAP Fields of Accreditation

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date:

01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012 this list supercedes all previous lists for this certificate number. Customers. Please verify the current accreditation standing with ORELAP.

			~///.	Na V
MATRIX:	Air			
Reference		Code	Description	
EPA 3C		10247708	Fixed Gasses by GC/TCD	
	Ameliate Code		Data distance	
	Analyte Code			
	3780	Carbon monoxide	100000000000000000000000000000000000000	
	4926 1843	Methane Nitrogen		
	3895	Oxygen	Landing Constitution	
0			The second secon	<u> </u>
EPA TO-15		10248803	VOCs collected in Canister	s by GC/MS
	Analyte Code	Analyte		
	5160	1,1,1-Trichloroethane	and the second of the second o	
	5110	1,1,2,2 Fetrachloroethane		
	5195	1,1,2-Trichloro-1,2,2-trifluoro	oethane (Freon 113)	
	5165	1,1,2-Trichlorgethane		
	4630	1,1-Dichloroethane	The state of the s	
	4640	1,1-Dichloroethylene	pethane (Freon 113)	
	5155	1,2,4-Trichlorobenzene	MINA.	
	5210	1,2,4-Trimethylbenzene		
	4585	1,2-Dibromoethane (EDB, E		
	4695	1,2-Dichloro-1,1,2,2-tetrafluo	oroethane (Freon-114)	
	4610 4635	1,2-Dichlorobenzene	o diablarida)	
	4655	1,2-Dichloroethane (Ethylen 1,2-Dichloropropane	le dichionae)	
	5215	1,3,5-Trimethylbenzene		
	9318	1,3-Butadiene		
	4615	1,3-Dichlorobenzene		
	4620	1,4-Dichlorobenzene		
	4735	1,4-Dioxane (1,4- Diethylene	eoxide)	
	4836	1-Propene		
	5220	2,2,4-Trimethylpentane		
	4410	2-Butanone (Methyl ethyl ke	etone, MEK)	
	4535	2-Chlorotoluene		
	4860 4542	2-Hexanone		
	4995	4-Ethyltoluene 4-Methyl-2-pentanone (MIBI	K)	
	4300	Acetaldehyde	17)	
	4315	Acetone		
	4320	Acetonitrile		
	4355	Allyl chloride (3-Chloroprope	ene)	
	4375	Benzene		
	5635	Benzyl chloride		

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date: 0

01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

this list supercedes all previous lists for this certificate number.

Analyte Code	Analyte	
4395	Bromodichloromethane	
4400	Bromoform	
4450	Carbon disulfide	
4455	Carbon tetrachloride	
4475	Chlorobenzene	
4575	Chlorodibromomethane	
4485	Chloroethane (Ethyl chloride)	
4505	Chloroform	
4645	ds-1,2-Dichloroethylene	
4680	cis-1,3-Dichloroproperie	
4555	Cyclohexane Cycloh	
4625	Dichlorodificorometriane (Energy and Control of Control	
4750	Ethanol Carlos C	
4765	Cyclohexane Dichlorodiffuorometheme (Freel) T Ethapol Ethylipenzeue Gasoline a les organics (GRO)	
9408	Gasoline (anne diganies (GRO)	
4835	Hexacolomburadiere	
4870	/ Iodometicane (Methyl bolbe)	
4895	(Isoprofix) allocher (2-Propage), teopropagal)	À
4900	Iscoropylbenzene a sesses again a sesses a sesse a sesses a sesse a se	
4930	Metranding page 100 to	
4950	Metry bromice (Bromomethane)	
4960	Methy chronice (Callotomethane)	
4990	Matry metracrylate in the second seco	
5000	Methylited barybeiner (MTBE)	
4975	Mathylene cha do (Dionloremetrane)	
5245	m Xylene	
5005	Nachthalene	
4825	n-Hadane	
4855	n Hexane	
5250	o-Xvenes	ľ
5255	-XVan	
5100	Stwerer 1	
4420	tert-Butyl alcord	
5115	Tetrachlorosthylere Ferchlorosthylens	
5120	Tetrahydrolluran (IPC)	
5140	Toluene Tale Date & A. T. Sa	
4700	trans-1,2-Dich ordethylene	
4685	trans-1,3-Dichloropropylene	
5170	Trichloroethene (Trichloroethylene)	
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	
5225	Vinyl acetate	
5230	Vinyl bromide (Bromoethane)	
5235	Vinyl chloride	
5260	Xylene (total)	

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date: 01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

this list supercedes all previous lists for this certificate number.

IATRIX	Drinking Wat	er		
eference			Code	Description
EPA 150.1			10008409	pH - Electrometric Measurement
	Analyte Code	Analyte		
	1900	pH		
PA 180.1 2	2		10011800	Turbidity - Nephelometric
	Analyte Code	Analyte		
	2055	Turbidity	- ID	FCA I VA
PA 200.7 5			10014003	ICP - metals
	Analyte Code	Analyte	/	
	1000	Aluminum		
	1010	Arsenio		
-	1015	Barium		
	1020	Beryllium		Autorities (Control of Control of
	1030	Cadmium		
	1035	Calcium		
	1040	Chromium		
	1055	Copper		
	1760	Hardness (d	alc.)	
	1070	Iron		
	1085	Magnesium		(0.223.1) 97E 49 D
	1090	Manganese		
	1105	Nickel		
	1150	Silver Sodium		
	1155 1190	Zinc		
	1130		(A)	
EPA 200.8 5	5.5		10014809	Metals by ICP-MS
	Analyte Code	Analyte	<u>'47/3/1</u>	"ATION"
	1005	Antimony **		
	1010	Arsenic		
	1015	Barium		
	1020	Beryllium		
	1030	Cadmium		
	1040	Chromium		
	1055	Copper		
	1075	Lead		
	1090	Manganese		
	1105	Nickel		
	1140	Selenium		
	1150	Silver		
	1165	Thallium		
	1190	Zinc		
PA 245.1 3	3		10036609	Mercury by Cold Vapor Atomic Absorption
	Analyte Code	Analyte		
	1095	Mercury		
PA 300.0			10053006	lon chromatography - anions.
	Analyte Code	Analyte		
	1540	Bromide		
	1570	Chlorate		

ORELAP ID: TN200002

EPA CODE: TN00003

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Issue Date:

01/16/2012

7105

7470

delta-BHC

Dieldrin Endosulfan I Endosulfan II

Expiration Date: 01/15/2013

As of 01/16/2012

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	Analyte Code	Analyte	_	
	1575	Chloride		
	1595	Chlorite		
	1730	Fluoride		
	1810	Nitrate as N		
	1840	Nitrite as N	. =	
	1870	Orthophosph	ate as P	
	2000	Sulfate		
EPA 314.0			10055400	Perchlorate in Drinking Water by Ion Chromatography
	Analyte Code	Analyte		
	1895	Perchlorate	100	
EPA 335.4			10061402	Methods for the Determination of Inorganic Substances in Environmental Samples
	Analyte Code	Analyte		
	1645	Total cyanide	9	
EPA 350.1 2			10063602	Ammonia Nitrogen - Colorimetric, Auto Phenate
	Analyte Code	Analyte		
	1515	Ammonia as	N1	
	1010	Ammonia as	IN	
EPA 353.2 2			10067604	Nitrate/Nitrite Nitrogen - Automated, Cadmium
	Analyte Code	Analyte		
-	1810	Nitrate as N		Process as the process of the second
	1840	Nitrite as N		
PA 504.1			10083008	EDB/DBCP/FCP micro-extraction, GC/ECD
	Analyte Code	Analyte		
	5180	1,2,3-Trichio	ronfanane	
	4570	1,2,0-1110110 1,2-Dibromo	-3-chioropropan	ne (DBCP)
	4585	1,2-Dibromo	ethane (EDB. E	thylene dibromide)
DA 607 1			10084807	Nitrogen & Phosphorous Pesticides (Drinking Water) by GC/NPD
PA 507 2			10004607	*** *** *** *** *** *** *** *** *** **
	Analyte Code	Analyte		
	7005	Alachlor		
	7065	Atrazine		
	7160	Butachlor		
	7835	Metolachlor		
	7845	Metribuzin		
	8125	Simazine		
PA 508 3	7		10085402	Chlorinated Pesticides in Water by GC/ECD
	Analyte Code	Analyte		
	7355	4,4'-DDD		
	7360	4,4'-DDE		
	7365	4,4'-DDT		
	7025	Aldrin		
	7110		alpha-Hexachlo	orocyclohexane)
	7115		eta-Hexachloro	
	7250	Chlordane (t	ech.)	

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyt	e Code	Analyte
75	20 E	indosulfan sulfate
75	40 E	indrin
75	30 E	indrin aldehyde
75	35 E	indrin ketone
71	20 ga	amma-BHC (Lindane, gamma-HexachlorocyclohexanE)
76	85 H	leptachlor
76		leptachlor epoxide
62		lexachlorobenzene
		lexachlorocyclopentadiene
		1ethoxychlor
80		ropachlor (Ramrod)
		oxaphene (Chlorinated camphene)
82		rifluralin (Treflam)
PA 515.1 4		10087408 Chlorinated acids Liquid/Liquid and GC/ECD
	/4	
Analyt		Analyte
86		4,5-1
85	45 2 ,	.4-D
85		4-DB
85	55 D	alapon
85		icamba
86	05 D	ichloroprop (Dichlorprop)
86		inoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)
86		ilvex (2.4,5-TP)
PA 524.2 4		10089006 Volatile Organic Compounds by purge and trap GC/MS
	3/40/00-1905	Analyte
51	J5 1,	1,1,2-Tetrachloroethane
PA 524.2 4.1		10088809 Volatile Organic Compounds GC/MS Capillary Column
Analyt	e Code	Analyte /
51		1,1,2-Tetrachloroethane
51		1,1-Trichloroethane
	JO 1,	1,2,2-Tetrachloroethane
	10 1	
51		
51 51	35 1,	1,2-Trichloroethane
51 51 46	35 1, 30 1,	1,2-Trichloroethane 1-Dichloroethane
51 51 46 46	35 1, 30 1, 40 1,	1,2-Trichloroethane 1-Dichloroethane 1-Dichloroethylene
51 51 46 46 46	35 1, 30 1, 40 1, 70 1,	1,2-Trichloroethane 1-Dichloroethane 1-Dichloroethylene 1-Dichloropropene
51 510 46 46 46 51	35 1, 30 1, 40 1, 70 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene
51 51 46 46 46 51 51	35 1, 30 1, 40 1, 70 1, 50 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichloropropane
51 510 46 46 46 51 51	55 1, 30 1, 40 1, 70 1, 50 1, 80 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trichlorobenzene
51 51 46 46 46 51 51 51	55 1, 30 1, 40 1, 70 1, 50 1, 80 1, 555 1, 10 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene
51 51 46 46 46 51 51 51 52	55 1, 30 1, 40 1, 70 1, 50 1, 50 1, 50 1, 55 1, 70 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2,0-Dibromo-3-chloropropane (DBCP)
51 51 46 46 46 51 51 51 52 45	55 1, 30 1, 40 1, 70 1, 50 1, 50 1, 51 1, 55 1, 70 1, 55 1, 55 1, 55 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide)
51 51 46 46 46 51 51 52 45 45	55 1, 30 1, 40 1, 70 1, 50 1, 50 1, 55 1, 10 1, 70 1, 835 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene
51 51 46 46 46 51 51 52 45 45 46	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 770 1, 770 1, 770 1, 770 1, 770 1, 755 1, 10 1, 755 1, 10 1, 755 1, 10 1, 10 1, 10 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene
51 46 46 46 51: 51: 52 45: 46: 46:	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 70 1, 35 1, 10 1, 35 1, 10 1, 35 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene
51 46 46 46 51: 51: 52 45: 45: 46: 46:	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 10 1, 35 1, 55 1, 10 1, 35 1, 50 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichloropenane (Ethylene dichloride) 2-Dichloropropane 3,5-Trichlorobenzene
51 46 46 46 51: 51: 52 45: 45: 46: 46: 68: 52	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 10 1, 35 1, 10 1, 35 1, 10 1, 35 1, 15 1, 15 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trimethylbenzene 2,4-Trimethylbenzene 2,0-Dichloropropane (DBCP) 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene
51 51 46 46 46 51: 51: 52 45: 46: 46: 68: 52	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 10 1, 55 1, 10 1, 15 1, 15 1, 15 1, 15 1, 15 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene
51 51 46 46 46 51 51 52 45 46 46 68 68 68 68 68 68 68 68 68 6	65 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 10 1, 35 1, 10 1, 35 1, 10 1, 35 1, 10 1, 36 1, 37 1, 38 1, 39 1, 30 1, 31 1, 32 1, 33 1, 34 1, 35 1, 36 1, 37 1, 38 1, 39 1, 30 1, 30 1, 31 1, 31 1, 32 1, 33 1, 34 1, 35 1, 36 1, 37 1, 38 1, 39 1, 30 1, 30 1, 31 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichloropropane 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene 2-Dichloropropane (Ethylene dichloride) 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene
51 46 46 46 51 51 52 45 46 46 68 58 52 46 46 46 46 46 46 46 46 46 46	65 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 55 1, 10 1, 35 1, 15 1, 15 1, 16 1, 17 1, 18 1, 18 1, 19 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2,0-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichloroethane (Ethylene dichloride) 2-Dichloropropane 3,5-Trichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichloropropane 4-Dichloropropane 4-Dichloropropane
51 46 46 46 51 51 52 45 46 46 46 46 46 46 46 46 46 46	65 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 35 1, 10 1, 35 1, 15 1, 15 1, 15 1, 16 1, 17 1, 18 1, 18 1, 19 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichloropropane 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichloroethane (Ethylene dichloride) 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene 3-Dichloropropane 4-Dichloropropane 4-Dichloropropane 4-Dichloropropane 4-Dichloropropane
51 46 46 46 51: 51: 52: 45: 46: 46: 46: 46: 46: 46: 46: 46	65 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 70 1, 85 1, 10 1, 15 1, 15 1, 15 1, 15 1, 16 1, 17 1, 18 1, 19 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichloropropane 4-Dichloropropane 4-Dichloropropane 4-Dichloropropane 4-Dichlorobenzene 2-Dichloropropane 4-Dichloropropane
51 46 46 46 51 51 52 45 46 46 46 46 46 46 46 46 46 46	55 1, 30 1, 40 1, 70 1, 50 1, 50 1, 55 1, 10 1, 70 1, 35 1, 15 1, 15 1, 15 1, 15 1, 15 1, 16 1, 17 1, 18 1, 19 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichloropropane 4-Dichloropropane 4-Dichloropropane 4-Dichloropropane Butanone (Methyl ethyl ketone, MEK) Chlorotoluene
51 51 46 46 46 51 51 51 52 45 46 46 46 46 46 46 46 46 46	55 1, 30 1, 40 1, 70 1, 50 1, 55 1, 10 1, 55 1, 110 1, 35 1, 15 1, 15 1, 15 1, 15 1, 16 1, 17 1, 18 1, 18 1, 19 1,	1,2-Trichloroethane 1-Dichloroethylene 1-Dichloropropene 2,3-Trichlorobenzene 2,3-Trichlorobenzene 2,4-Trichlorobenzene 2,4-Trimethylbenzene 2-Dibromo-3-chloropropane (DBCP) 2-Dibromoethane (EDB, Ethylene dibromide) 2-Dichlorobenzene 2-Dichlorobenzene 2-Dichloropropane 3,5-Trichlorobenzene 3,5-Trimethylbenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichlorobenzene 3-Dichloropropane 4-Dichloropropane

ORELAP ID: TN200002

EPA CODE: TN00003

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Customers. Please verify the current accreditation standing with ORELAP.

Analyte Code	Analyte
4910	4-Isopropyltoluene (p-Cymene)
4995	4-Methyl-2-pentanone (MIBK)
4315	Acetone
4375	Benzene
4385	Bromobenzene
4390	Bromochloromethane
4395	Bromodichloromethane
4400	Bromoform
4450	Carbon disulfide
4455	Carbon tetrachloride
4475	Chlorobenzene Programme Chlorobenzene Chlorobenze Chlorobenzene Chlorobenze Chlorobenzene Chlorobenze Chlorobenzene Chlorobenze Chlorobenzene Chlorobenzene Chlorobenzene Chlorobenzene Chlorobenzene Chlorobenze Chlorobenzene Chlorobenzene Chlorobenzene Ch
4575	Chlorobenzene Chlorodibromomethare Chlorodihane (Ethyl caloride) Chloroform graft 2 Dichlorodiylene
4485	Chloroethane (Elify Chloride)
4505	Chicroforms ()
4645	ofarf 2 Dichigraet viene
4680	cis-1,3-Dicalimopropene
4595	Dibramathe hane (Methy ene bramide)
4625	Dichlored fluoremetrane (Freen-12)
4765	Ethylbenzene
4835	Hexachloropulacione
4840	Hexachloroethane :
4870	logometrana Menyl ioddey
4900	I Isopropylenzone
4950	A Metoyl coomide (Bromon ethane)
4960	Motoy) el la comprantement
5000	Methy terbutyl chemitrise
4975	in C. Methyler and lingue i B of promengine is a 15 commence of the commence o
5005	Nachthallene Tea Thair State Leading Communication
4435	n/Buly(bergene
5090	n-Probylbenzene
4440	sec Baylbenzens
5100	Styrener 3.
4445	terr-Buty bet zene
5115	Tetrachioroetics are deem to set to vene
5140	Toluëne:
4700	trans-1,2-Digniorogy Negative 18 18 18 18 18 18 18 18 18 18 18 18 18
4685	trans-1,3-Dichioropropylene
4605	trans-1,4-Dichlore-2-butene
5170	Trichloroethene (Trichloroethylene)
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)
5235	Vinyl chloride
5260	Xylene (total)
552 2 1	10095804 Haloacotic Acid/Dalanon Liquid/Liquid Evi

EPA 552.2 1

10095804

Haloacetic Acid/Dalapon, Liquid/Liquid Extraction, Derivitization and GC/ECD

Analyte Code	Analyte	
9312	Bromoacetic acid	
9315	Bromochloroacetic acid	
9336	Chloroacetic acid	
9357	Dibromoacetic acid	
9360	Dichloroacetic acid	
9642	Trichloroacetic acid	

SM 2120 B 20th ED

20224004

Color by Visual Comparison

Analyte Code	Analyte	
1605	Color	-

ORELAP ID: TN200002

EPA CODE: TN00003

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SM 2130 B 20th ED		20042404	Turbidity by Nephelometric Determination
Analyte Code	Analyte		
2055	Turbidity		,
SM 2150 B 20th ED		20043407	Odor by Threshold Odor Test
Analyte Code	Analyte		
1855	Odor	- training	gyndia (1960–1960) a tha ann
SM 2320 B 20th ED		20045209	Alkalinity by Titration
Analyte Code	Analyte	"ol	RECO
1505	Alkalinity as	CaCO3	3/1/
SM 2340 B 20th ED		20046202	Hardness by calculation
Analyte Code	Arialyte		
1750	Hardness		
SM 2510 B 20th ED		20048208	Conductivity by Probe
Analyte Code	Analyte		
1610	Conductivity		
SM 2540 C 20th ED		20050004	Total Dissolved Solids
Analyte Code	Analyte		Constitution of the Consti
1955	Residue-filte	rable (TDS)	
SM 4110 B 20th ED	7.77	20076602	Anions by Ion Chromatography with Chemical Suppression of Eluent
Analyte Code	Analyte		
1575	Chloride 📏	4.55.000	PATIONBOY
1730	Fluoride	MARY.	
1810 18 4 0	Nitrate as N Nitrite as N	7447	
1870	Orthophosph	até as P	
2000	Sulfate	iate as i	
SM 4500-CI G 20th ED		20081203	Residual Chlorine by DPD Colorimetric Determination
Analyte Code	Analyte		
1940	Total residua	l chlorine	
SM 4500-CN C 20th ED		20091605	Cyanide, Total After Distillation
Analyte Code	Analyte		
1635	Cyanide		
SM 4500-CN E 20th ED		20092404	Cyanide by Colorimetric Determination
Analyte Code	Analyte		
1635 1645	Cyanide Total cyanide		-
SM 4500-CN G 20th ED	. otal oyalla	20093203	Cyanide Amenable to Chlorination after Distillation
Analyte Code	Analyte		

ORELAP ID: TN200002

EPA CODE: TN00003

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SM 4500-H+ B 20th ED		20104807	pH by Probe
Analyte Code	Analyte		
1900	рН		
SM 4500-NH3 G 20th ED		20111006	Ammonia by Automated Phenate
Analyte Code	Analyte		
1515	Ammonia as	N .	And the state of t
6M 4500-NO3 ⁻ E 20th ED	7 (1 (1 (1 (1 (1 (1 (1 (1 (1 (20114403	Nitrate Nitrogen by Cadmium Reduction Method
Analyte Code	Analyte	o l	RECO
1805	Nitrate	174.3	10 miles 10
SM 4500-NO3 F 20th ED		20116205	Nitrate Nitrogen by Automated Cadmium Reduction Method
Analyte Code	Analyte	100	
1810	Nitrate as N	and the second second	
1840	Nitrite as N		
SM 4500-P E 20th ED		20123802	Phosphorus by Ascorbic Acid Reduction
A - 1 - 4 - 0 - 1			
Analyte Code	Analyte Orthophospi	neto as B	
	Orthophospi		
SM 5310 C 20th ED		20138403	Total Organic Carbon by Persulfate-Ultraviolet Oxidation Method
Analyte Code	Analyte		
2040	Total organi	c carbon	
SM 5320 B 20th ED		20140403	Absorbable Organic Halogen
	Alba and A	m _k	
Analyte Code	Analyte	Tay.	
2045	rotar organi	c halidēs (iF⊚X),	
SM 5540 C 20th ED		20144609	Surfactants as MBAS
Analyte Code	Analyte		BENEFIT TO THE PERSON OF THE P
2025	Surfactants	- MBAS	
SM 5910 B 19th ED		20145806	UV absorbing organic constituents
Analyte Code	Analyte		
2060	UV 254		

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EPA CODE: TN00003

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	Non-Potable	, juto	Codo	Description
Reference ————			Code	Description
ASTM D106	7-92		30003806	Acidity or Alkalinity of Water
	Analyte Code	Analyte		
	1500	Acidity, as C	aCO3	
EPA 1000			10114600	Fathead Minnow Larval Survival and Growth, chronic (EPA 821/R-02/013)
	Analyte Code	Analyte		
	3450	Tox, chronic		KELOA
EPA 1002			10115001	Daphnid Survival and Reproduction, chronic (EPA 821/R-02/013)
	Analyte Code 3450	Analyte *	fw organism	
	3430	TOX	Company of the Compan	A
EPA 1010			10116606	Pensky-Martens Closed-Cup Method for Determining Ignitability
	Analyte Code	Analyte		
	1780	Ignitability		
EPA 1010A			10234807	Pensky-Martens Closed-Cup Method for Determining Ignitability
	Analyte Code	Analyte		And the second of the second o
	1780	Ignitability		AND THE RESERVE OF THE PARTY OF
EPA 1110	\\		10118000	Corrosivity Toward Steel
	Analyte Code	Analyte		
	. 1615	Corrosivity	•	and the second s
EPA 1110A			40235208	Corrosivity Toward Steel
	Analyte Code	Analyte		TATION
	1615	Corrosivity		TAIL TO THE TAIL THE TAIL TO T
EPA 120.1			10006403	Conductance - Specific @ 25 C
	Analyte Code	Analyte		
	1610	Conductivity		
EPA 130.1			10006801	Hardness - Colorimetric, Automated EDTA
	Analyte Code	Analyte		
-	1750	Hardness		
EPA 1311			10118806	Toxicity Characteristic Leaching Procedure
	Analyte Code	Analyte		
	8031	Extraction/Pr	eparation	
EPA 1312			10119003	Synthetic Precipitation Leaching Procedure
	Analyte Code	Analyte		
	8031	Extraction/Pr	eparation	

ORELAP ID: TN200002

EPA CODE: TN00003

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1025

1030

1035

Boron

Cadmium

Calcium

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EPA 160.4 10256801 Total Volatile Solids, ignition @ 550 C. Analyte Code Analyte 4075 Vol. residue, density, water & solids content of coatings **EPA 1657** 10126008 Organophosphorus Pesticides by Liquid/Liquid Extraction and GC/FPD Analyte Code Analyte 7075 Azinphos-methyl (Guthion) 7125 Bolstar (Sulprofos) Chlorpyrifos 7300 Coumaphos 7315 Demeton-o 7395 7385 Demeton-s Diazinon 7410 Dichlorovos (8610 VP, Dichlorvos) Dimethoat 7475 Disulfoton 8625 7550 EPN 7570 Ethoprop 7600 Fensulfothion 7605 Fenthion Malathion 7770 7785 Merphos 7825 Methyl parathion (Parathion) 7850 Mevinphos 7905 Naled 7985 Phorate. 8110 Ronnel 8155 Sulfotepp Tetrachlorvinphos (Stirophos, Gardona) Z-iso 8200 8210 Tetraethy/pyrophosphate (TEPP) Tokuthion 8245 othiophos) Trichloronate 8275 N-Hexane Extractable Material (Oil and Grease) by Extraction and EPA 1664A (HEM) Analyte Code Analyte 1803 n-Hexane Extractable Material (O&G) EPA 1664A (SGT-HEM) 10261606 Silica Gen Treated N-Hexane Extractable Material (Oil and Grease) Analyte Code Analyte n-Hexane Extractable Material (O&G) 1803 EPA 180.1 2 10011800 **Turbidity - Nephelometric** Analyte Code Analyte 2055 **Turbidity** EPA 200.7 5 10014003 ICP - metals Analyte Code Analyte 1000 Aluminum 1005 Antimony 1010 Arsenic 1015 Barium Beryllium 1020

ORELAP ID: TN200002

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Aı	nalyte Code	Analyte		
	1040	Chromium		
	1050	Cobalt		
	1055	Copper		
	1760	Hardness (ca	alc.)	
	1070	Iron	,	
	1075	Lead		
	1085	Magnesium		
	1090	Manganese		
	1100	Molybdenum	The second section is the	
	1105	Nickel		
	1125	Potassium	 	
	1140	Selenium		
	1150	Silver	13.1	
	1155	Sodium 🤞		711/2
	1165	Thallium	V/	ECOGN
	1175	Tin .	/	
	1180	Titanium		
	1185	Vanadium		
	1190	Zinc		
PA 200.8 5.5			10014809	Metals by ICP-MS
			100	
Ar	nalyte Code	Analyte		The second secon
	1005	Antimony		F RESERVED.
	1010	Arsenic		
	1015	Barium		
	1020	Beryllium		in the state of th
	1030	Cadmium		
	1040	Chromium		
	1055	Copper		
	1075	Lead		
	1090	Mangariese		
	1100	Molybdenum	% _	
	1105	Nickel	/h.	
		Selenium		
	1140		74. 7 1 Pro-	ATIONBOY
	1150	Silver	**************************************	
	1165	Thallium		
	1175	Tin		
	1180	Titanium	Sec.	
	1185	Vanadium		
	1190	Zinc		
PA 2000 Fathe	ad minnow Acu	te MHSF 20°C	10264809	Fathead Minnow, acute
Λ.	nalyte Code	Analyte		
AI	3455		te, fw organism	
PA 2002 Cerio	daphnia dubia A		10214605	Cerodaphnia dubia, acute
MW 20°C	nalute Codo	Analuto		
Ar	nalyte Code	Analyte	atu 0 marina ann	
	3440	Tox, acute, e	stu & marine organi	SM
PA 218.6			10268403	Dissolved Hexavalent Chromium by Ion Chromatography
Ar	alyte Code	Analyte		
	1045	Chromium V		
PA 245.1 3			10036609	Mercury by Cold Vapor Atomic Absorption
	alyte Code	Analyte		

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EPA CODE: TN00003

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	Analyte Code	Analyte		
	1095	Mercury		
PA 300.0 2.	1		10053200	Methods for the Determination of Inorganic Substances in Environmental Samples
	Analyte Code	Analyte		
	1540	Bromide		
	1575	Chloride		
	1730	Fluoride		
	1810	Nitrate as N		
	1820	Nitrate-nitrite		
	1840	Nitrite as N		
	1870	Orthophosph	iate as P	
	2000	Sulfate		
PA 3005A			10/33207	Acid Digestion of waters for Total Recoverable or Dissolved Metals
	Analyte Code	Analyte		
	8031	Extraction/Pr	eparation	
PA 3010A			10133605	Acid Digestion of Aqueous samples and Extracts for Total Metals
	Analyte Code	Analyte		
	8031	Extraction/Pr	eparation	
PA 3015			10133809	Microwave Assisted Acid Digestion of Aqueous Samples and Extract
-	Analyte Code	Analyte		STARTS FOR THE START
	8031	Extraction/Pi	reparation	
PA 3015A		47	10134006	Microwave Assisted Acid Digestion of Sediments, Sludges, Soils, and Oils
	Analista Cada	Analisa		Olis
	Analyte Code	Analyte	** <u> </u>	
	8031	Extraction#P	reparation	
EPA 3020A			10134404	Acid Digestron of Aqueous samples and Extracts for Total Metals for Analysis by GFAA
	Analyte Code	Analyte		
	8031	Extraction/Pi	reparation	
PA 310.2			10055206	Alkalinity as CaCO3 - Colorimetric, Automated
	Analyte Code	Analyte		
	1505	Alkalinity as	CaCO3	
EPA 335.4			10061402	Methods for the Determination of Inorganic Substances in
				Environmental Samples
	Analyte Code	Analyte		
	1635	Cyanide		
PA 350.1 2	1		10063602	Ammonia Nitrogen - Colorimetric, Auto Phenate
	Analyte Code	Analyte		
	1515	Analyte Ammonia as	N	
EPA 351.2 2		, annionia ad	10065404	Total Kieldahl Nitrogen - Block Digest, Phenate
_FA 331.4 Z			10000404	i otal Njetuani Nitrogen - Diock Digest, Ffletiate
	Analyte Code	Analyte		
	1795	Kjeldahl nitro	ann total	

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Custome	rs. Please verify	the curren	t accreditation :	standing with ORELAP.
EPA 3510C			10138202	Separatory Funnel Liquid-liquid extraction
	Analyte Code	Analyte		
	8031	Extraction/P	reparation	
EPA 3520C			10139001	Continuous Liquid-liquid extraction
	Analyte Code	Analyte		
	8031	Extraction/P	reparation	meretaris 1200 General Mariana
EPA 353.2 2			10067604	Nitrate/Nitrite Nitrogen - Automated, Cadmium
		£1		ECA
	Analyte Code	Analyte		ECUA
	1820 6484	Nitrate-nitrite Nitrocellulos		370. (1)
	0404	Totalogonalog	No.	COUNTY OF THE PARTY OF THE PART
EPA 376.1	į.		10074201	Sulfide - Titrimetric, lodine.
	Analyte Code	Analyte		
	2005	Sulfide		
EPA 410.4 2			10077404	Chemical Oxygen Demand - Colorimetric, Automated.
	A			
	Analyte Code 1565	Analyte Chemical ov	ygen demand	
	1303	Gridinical Cx		
EPA 420.1			10079400	Phenolics - Spectrophotometric, manual.
	Analyte Code	Analyte		
	1905	Total pheno	ics	
EPA 420.4		e 1944	10080203	Phenolics, Total Recoverable by Semi-Automated Colorimetry
	Analyte Code 1905	Analyte Total phenol		
	1905	Total prienti		ATHAN .
EPA 5030B		N.	10153409	Purge and trap for aqueous samples
	Analyte Code	Analyte		
-	8031	Extraction/P	reparation	
EPA 5030C			10284603	Purge-and-Trap for Aqueous Samples
	Analyte Code 8031	Analyte Extraction/P	reparation	
	0031	EXITACIION/F		
EPA 6010B			10155609	ICP - AES
	Analyte Code	Analyte		
-	1000	Aluminum		
	1005 1010	Antimony Arsenic		
	1010	Barium		
	1015	Beryllium		
	1025	Boron		
	1030	Cadmium		
	1035	Calcium		
	1040	Chromium		
	1050	Cobalt		
	1055 1070	Copper Iron		
	1070	11001		

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	Analyte Code	Analyte
	1075	Lead
	1080	Lithium
	1085	Magnesium
	1090	Manganese
	1100	Molybdenum
	1105	Nickel
	1125	Potassium
	1140	Selenium
	1150	Silver
	1155	Sodium
	1160	Strontium
	1165	Thallium
	1175	Tin
	1180	Titanium 💸
	1185	Vanadium
3700	1190	Zinc
DA GOADC		ADMERTON LCD AEC

EPA 6010C

Analyte Code Analyte 1000 Aluminun 1005 Antimony 1010 Arsenic 1015 Barium 1020 Beryllium 1025 Boron 1030 Cadmium 1035 Calcium 1040 Chromium Cobal 1050 1055 Copp 1070 1075 1080 Lithjum Magnesium 1085 1090 Manganese Molybdenum 1100

Nickel Potassium

Silver

Sodium

Strontium

Vanadium

Thallium

Tin Titanium

Zinc

Selenium

1105

1125 1140

1150

1155

1160

1165

1175

1180 1185

1190

EPA 602

10102202

Purgeable Aromatics by GC/PID Purge & Trap

Analyte Code	Analyte
 4375	Benzene
4765	Ethylbenzene
5000	Methyl tert-butyl ether (MTBE)
4420	tert-Butyl alcohol
5140	Toluene
5260	Xylene (total)

ORELAP ID: TN200002

EPA CODE: TN00003

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EPA 6020 10156000 **Inductively Coupled Plasma-Mass Spectrometry** Analyte Code Analyte 1005 Antimony 1010 Arsenic 1015 Barium 1020 Beryllium 1030 Cadmium 1040 Chromium 1055 Copper Lead 1075 1090 Manganese Molybdenum 1100 1105 Nickel Selenium, 1140 1150 Silver 1165 Thallida 1175 1185 Vanadiun Zinc 1190 Inductively Coupled Plasma-Mass Spectrometry **EPA 6020A** 10156408 Analyte Code Analyte 1005 Antimony 1010 Arsenic 1015 Barium 1020 Beryllium 1030 Cadmium 1040 Chromium 1055 Copper 1075 Manganese Molybdenum 1090 1100 1105 Nickel

EPA 608

10103603

Selenium

Silver Thallium

Tin Vanadium

Zinc

1140 1150

1165 1175

1185 1190

Organochlorine Pesticides & PCBs by GC/ECD

Analyte Code	Analyte
7355	4,4'-DDD
7360	4,4'-DDE
7365	4,4'-DDT
7025	Aldrin
7110	alpha-BHC (alpha-Hexachlorocyclohexane)
7240	alpha-Chlordane
8880	Aroclor-1016 (PCB-1016)
8885	Aroclor-1221 (PCB-1221)
8890	Aroclor-1232 (PCB-1232)
8895	Aroclor-1242 (PCB-1242)
8900	Aroclor-1248 (PCB-1248)
8905	Aroclor-1254 (PCB-1254)
8910	Aroclor-1260 (PCB-1260)
7115	beta-BHC (beta-Hexachlorocyclohexane)
7250	Chlordane (tech.)
7265	Chloroneb `

ORELAP ID: TN200002

EPA CODE: TN00003

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	Analyte Code	Analyte
	7310	Chlorthalonil (Daconil)
	7105	delta-BHC
	7470	Dieldrin
	7510	Endosulfan I
	7515	Endosulfan II
	7520	Endosulfan sulfate
	7540	Endrin
	7530	Endrin aldehyde
	7535	Endrin ketone
	7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
	7245	gamma-Chlordane
	7685	
		Heptachlor Heptachlor epoxide Hexachlorobenzene Methoxyonion
	7690	Heritachior epoxice
	6275	Hexachlorobenzene
	7810	Methoxyanlor
	8250	Toxaphene (Chlorinated camphene)
PA 610		10104402 Polynuclear Hydrocarbons by HPLC/UV-VIS
	Analyte Code	Analyte
	5500	Acenaphthene
	5505	Acenaphthylene
	5555	Anthracene
	5575	Benzo(a)anthracene
	5580	Benzo(a)pyréne
	5590	Benzo(g.h,i)perylene
	5600	Benzo(k)fluoranthene
	5585	Benzo[b]fluoranthene
	5855	Chrysene
	5895	Dibenz(e.h) anthracene
	6265	Fluoranthene
	6270	Fluorene
	6315	Indeno(1,2/3-cd) pyrene
	5005	Naphthalene
	6615	Phenanthrene
	6665	Fluorene Indeno(1,2:3-cd) pyrene Naphthalene Phenanthrene Pyrene
	0000	
PA 615		10105609 Chlorinated Herbicides by Liquid/Liquid Extraction, Derivitization and
		GC/ECD
	Analyte Code	Analyte
	8560	2,4-DB
	8595	Dicamba
	8620	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)
	7775	MCPA
	7780	MCPP
	1100	WOTT

622		10106806	Organophosphorus Pesticides by Liquid/Liquid Extraction and GC/NPD
An	alyte Code	Analyte	
	7125	Bolstar (Sulprofos)	·
	7300	Chlorpyrifos	
	7315	Coumaphos	
	7395	Demeton-o	
	7385	Demeton-s	
	8610	Dichlorovos (DDVP, Dichlorvos)	
	7475	Dimethoate	
	7570	Ethoprop	
	7600	Fensulfothion	
	7605	Fenthion	
	7785	Merphos	

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EPA CODE: TN00003

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Issue Date:

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Analyte Code	Analyte
7825	Methyl parathion (Parathion, methyl)
7850	Mevinphos
7985	Phorate
8155	Sulfotepp
8200	Tetrachlorvinphos (Stirophos, Gardona) Z-isomer
8210	Tetraethyl pyrophosphate (TEPP)
8245	Tokuthion (Prothiophos)

EPA 6

e and trap GC/MS

624			10107207	Volatile Organic Compounds by purge
	Analyte Code	Analyte		roethane (Freon 113)
	5105	1.1.1.2-Tetr	achloroethane	
	5160	1,1,1-Trichle		
	5110		achloroethane	
	5195			roethane (Freon 113)
	5165	1,1,2-Trickle		
	4630	1,1-Dichloro	ethane	
	4640	1,1-Dichlord		
	4670	1,1-Dichlord	Control of the Contro	
	5150	1,2,3-Trichlo	SAND AND RECORD STORY	
	5180	1,2,3-Trichlo		
	5182		thylbenzene	
	5155	1,2,4-Trichlo		
	5210		thylbenzene	The state of the s
	4570		o-3-chloropropa	ane (DBCP)
	4585			Ethylene dibromide)
	4610	1,2-Dichloro		
	4635		ethane (Ethyle	ne dichloride)
	4655	1,2-Dichlero		
	5215		thylbenzene	
	4615	1,3-Dignioro		
	4660	1,3-Dichlord		
	4620	1,4-Dichloro	benzene	
	4735		(1,4-Diethylei	neoxide)
	4665	2,2-Dichloro		neoxide):
	4410		(Methyl ethyl k	etone MFK)
	4500		yl vinyl ether	
	4535	2-Chlorotolu		
	4860	2-Hexanone		
	5020	2-Nitropropa		
	4540	4-Chlorotolu		
	4910		oluene (p-Cym	ene)
	4995		pentanone (MI	
	4315	Acetone		
	4320	Acetonitrile		
	4325	Acrolein (Pro	openal)	
	4340	Acrylonitrile		
	4355	•	e (3-Chloroprop	nene)
	4375	Benzene	(,
	4385	Bromobenze	ene	
	4390	Bromochloro		
	4395	Bromodichlo		
	4397		e (Ethyl Bromi	de)
	4400	Bromoform		,
	4450	Carbon disu	lfide	
	4455	Carbon tetra		
	4475	Chlorobenze		
	4575	Chlorodibror		
	4485		e (Ethyl chloric	ie)
	4505	Chloroform	, ,	•

Chloroprene (2-Chloro-1,3-butadiene)

ORELAP ID: TN200002

EPA CODE: TN00003

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 Analyte Code	Analyte
 4645	cis-1,2-Dichloroethylene
4680	cis-1,3-Dichloropropene
4600	cis-1,4-Dichloro-2-butene
4555	Cyclohexane
4560	Cyclohexanone
4595	Dibromomethane (Methylene bromide)
4625	Dichlorodifluoromethane (Freon-12)
4725	Diethyl ether
9375	Di-isopropylether (DIPE)
	* *
4750 4755	Ethanol The Control of the Control o
4755	Ethyl acetate
4810	Ethyl methaniylate
4765	Ethylbenzene 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
4770	Ethylet-butylisther IE PBE) (2-Ethoxy-2-methy propare)
4835	Hexachidrobdiadlene
4870	lodometratio (Methyl rocide)
4875	Isofautula schol (2 Methyl-1-propanol)
4895	Isoprony) alcohol (2-Propane), Isopropane))
4900	leopropylbenzene
4925	Methatoglonitrie .
4940	Methyl aberate
4950	Methyl-bromice (Bromomethane)
4960	Methyl chloride (Chloromethane)
4990	Methyl methacrylate
5000	Methyl tert-butyl ether (MT-BE)
4965	Methyldycichexane
4975	Methylane dreat de (Dichloromethane)
5245	m-Xylene
4365	n-Amyl.e/conc
5005	Naphthalese
4425	n.But) Eldono (RiButano, n.Butano).
4415	n-Buryl & Salate
4435	n-Buty dentection
4855	n-Hexenex 1
5027	n-Ode (Extra Control of the Control
5090	n-Propylhenzene
5250	o-Xylene
5035	Pentachloroethane
5080	Propionitrile (Ethyl cyanide)
5255	p-Xylene
4440	sec-Butylbenzene
5100	Styrene
4370	T-amylmethylether (TAME)
4420	tert-Butyl alcohol
	and the second s
4445	tert-Butylbenzene
5115	Tetrachloroethylene (Perchloroethylene)
5120	Tetrahydrofuran (THF)
5140	Toluene
4700	trans-1,2-Dichloroethylene
4685	trans-1,3-Dichloropropylene
4605	trans-1,4-Dichloro-2-butene
5170	Trichloroethene (Trichloroethylene)
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)
5225	Vinyl acetate
5235	Vinyl chloride
5260	Xylene (total)
	rigidite (seeing

EPA 625

10300002

Base/Neutrals and Acids by GC/MS

Analyte Code	Analyte
6715	1,2,4,5-Tetrachlorobenzene

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Analyte Code	Analyte
5155	1,2,4-Trichlorobenzene
6221	1,2-Diphenylhydrazine
6420	1,4-Naphthoquinone
5790	1-Chloronaphthalene
6425	1-Naphthylamine
6735	2,3,4,6-Tetrachlorophenol
9363	2,3-Dichloroaniline
6835	2,4,5-Trichlorophenol
6840	2.4.6-Trichlorophenol
6000	
6130	2,4-Dimethylphenol
6175	2.4-Dinitrophenol
	2.4-Diffusion Effective 2.4-Diffusion 2.4-Di
6185	2,4-Dinitrotoluene 2.4 JNT
6190	2,6-Dinitrotaluener 2,6-DNT)
5795	2,4-Dichiorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrotoluene (2,4-DNT) 2,6-Dinitrotoluene (2,5-DNT) 2-Oblorophenol 2-Chilarophenol
5800	
6360	2-Melley 4-8-dinitrophenal (4-6-Dinitro-2-methylphenal)
6385	2-Memoraphinalene
6400	2-Methylphenol (a-Cresci)
6430	2-Naphthylamine
6460	2-Nitroaniline
6490	2-Nitropheno
5945	3.3-Dichloropenzidine
6465	3-Nitroaniline
5540	4-Aminopiphenyl
5660	4-Bromopheny phenyi ether
5700	4-Chloro-3-methylphenol
5745	4-Chlorean ins.
5825	4-Chloropheny phenylether
6410	4-Methypheral (a-Cresci)
6470	4-Nithenline
6500	4-Nitroi nendi
5500	Acenaphthene
5505 5510	Acethologop
	Acetophenone
6700 5545	alpha-Terpineol
5545 5555	Anthropona Anthropona
5555	Anthracene di antique de la constant
5595	Benzidine Benzidine
5575	Benzo(a)anthracene
5580	Benzo(a)pyrene
5590	Benzo(g,h,i)perylene
5600	Benzo(k)fluoranthene
5585	Benzo[b]fluoranthene
5610	Benzoic acid
5760	bis(2-Chloroethoxy)methane
5765	bis(2-Chloroethyl) ether
5780	bis(2-Chloroisopropyl) ether
5670	Butyl benzyl phthalate
5680	Carbazole
5855	Chrysene
6065	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)
5895	Dibenz(a,h) anthracene
5905	Dibenzofuran
6070	Diethyl phthalate
6135	Dimethyl phthalate
	Di-n-butyl phthalate
5925 6200	· ·
6200	Di-n-octyl phthalate
7580	Famphur
6265	Fluoranthene

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date:

01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

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	Analyte Code	Analyte	
	6275	Hexachlorobenzene	
	4835	Hexachlorobutadiene	
	6285	Hexachlorocyclopentadiene	
	4840	Hexachloroethane	
	6290	Hexachlorophene	
	6295	Hexachloropropene	
	6315	Indeno(1,2,3-cd) pyrene	
	6320	Isophorone	
	7740	Kepone	
	5005	Naphthalene	
	5875	n-Decane	
	5015	Nitrobenzene	ECOGNA A
	6525	n-Nitrosodiethylämine	
	6530	n-Nitrosodimethylamine	
	5025		
		n-Nitroso-dl-n-butylamine	
	6545	n-Nitrosodi-n-propylamine	
	6535	n-Nitrosodiphenylamine	
	6565	n-Nitrosopyrrolidine	
	6580	n-Octadecane	
	6590	Pentachlorobenzene	
	5035	Pentachloroethane	APPS CONTRACTOR OF THE PROPERTY OF THE PROPERT
	6605	Pentachlorophenol	
	6615	Phenanthrene	
	6625	Phenol	
	6665	Pyrene	
	5095	Pyridine	
PA 7196A	3	10162400	Chromium Hexavalent colorimetric
	Analyto Codo	Analyte	
	Analyte Code		
	1045	Chromium VI	
PA 7199		10163005	Determination of Hexavalent Chromium in Drinking Water, Groundwater and Industrial Wastewater Effluents by Ion
	Analyte Code	Analyte	Ghromatography ()
	1045	Chromium VI	
PA 7470A		10165807	Mercury in Liquid Waste by Cold Vapor Atomic Absorption
	Analyte Code	Analyte	
			The state of the s
	1095	Mercury	
PA 8011			1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by Microextraction and GC/ECD
EPA 8011	1095	Mercury 10173009	
EPA 8011	1095 Analyte Code	Mercury 10173009 Analyte	Microextraction and GC/ECD
PA 8011	1095 Analyte Code 4585	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler	Microextraction and GC/ECD
PA 8011	1095 Analyte Code	Mercury 10173009 Analyte	Microextraction and GC/ECD
· · · · · · · · · · · · · · · · · · ·	1095 Analyte Code 4585	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane	Microextraction and GC/ECD
	1095 Analyte Code 4585	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler	Microextraction and GC/ECD ne dibromide)
	1095 Analyte Code 4585 4580	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601	Microextraction and GC/ECD ne dibromide)
	Analyte Code 4585 4580 Analyte Code	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte	Microextraction and GC/ECD ne dibromide)
· · · · · · · · · · · · · · · · · · ·	1095 Analyte Code 4585 4580 Analyte Code 9369	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO)	Microextraction and GC/ECD ne dibromide)
PA 8011	1095 Analyte Code 4585 4580 Analyte Code 9369 4750	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol	Microextraction and GC/ECD ne dibromide)
· · · · · · · · · · · · · · · · · · ·	1095 Analyte Code 4585 4580 Analyte Code 9369 4750 9408	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol Gasoline range organics (GRO)	Microextraction and GC/ECD de dibromide)
· · · · · · · · · · · · · · · · · · ·	1095 Analyte Code 4585 4580 Analyte Code 9369 4750	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol	Microextraction and GC/ECD ne dibromide)
	1095 Analyte Code 4585 4580 Analyte Code 9369 4750 9408	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol Gasoline range organics (GRO)	Microextraction and GC/ECD de dibromide)
PA 8015B	1095 Analyte Code 4585 4580 Analyte Code 9369 4750 9408 4930	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol Gasoline range organics (GRO) Methanol 10305609	Microextraction and GC/ECD le dibromide) Non-halogenated organics using GC/FID
PA 8015B	1095 Analyte Code 4585 4580 Analyte Code 9369 4750 9408	Mercury 10173009 Analyte 1,2-Dibromoethane (EDB, Ethyler Dibromochloropropane 10173601 Analyte Diesel range organics (DRO) Ethanol Gasoline range organics (GRO) Methanol	Microextraction and GC/ECD le dibromide) Non-halogenated organics using GC/FID

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

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 Analyte Code	Analyte
4750	Ethanol
9408	Gasoline range organics (GRO)
4930	Methanol

EPA 8021B

10174808

Aromatic and Halogenated Volatiles by GC with PID and/or ECD Purge

	& Hap
Analyte Code	Analyte
4375	Benzene
4765	Ethylbenzene
5000	Methyl tert-butyl ether (MTBE)
5245	m-Xylene
5250	o-Xylene
5255	p-Xylene
5140	Toluene
5260	Xylene (total)

EPA 8081A

10178606

Organochlorine Pesticides by GC/ECD

 1	
Analyte Code	Analyte
 7355	4,4'-DDD
7360	4,4'-DDE
7365	4,4'-DDT
7005	Alachlor
7025	Aldrin
7110	alpha-BHC (alpha-Hexachlorocyclohexane)
7240	alpha-Chlordane
7115	beta-BHC (beta-Hexachlorocyclohexane)
7250	Chlordane (tech.)
7265	Chloroneb
7310	Chlorite ionil (Daconil)
7105	delta-BH0
7470	Dieldrin
7510	Endosulfan I
7515	Endosulfan II
7520	Endosulfan sulfate
7540	Endrin
7530	Endrin aldehyde
7535	Endrin ketone
7575	Etridiazole
7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
7245	gamma-Chlordane
7685	Heptachlor
7690	Heptachlor epoxide
6275	Hexachlorobenzene
6285	Hexachlorocyclopentadiene
7810	Methoxychlor
7975	Permethrin (total)
8045	Propachlor (Ramrod)
8250	Toxaphene (Chlorinated camphene)
8295	Trifluralin (Treflan)

EPA 8081B

10178800

Organochlorine Pesticides by GC/ECD

Analyte Code	Analyte
7355	4,4'-DDD
7360	4,4'-DDE
7365	4,4'-DD T
7005	Alachlor
7025	Aldrin
7110	alpha-BHC (alpha-Hexachlorocyclohexane)

ORELAP ID: TN200002

EPA CODE: TN00003

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	Analyte Code	Analyte
	7240	alpha-Chlordane
	7115	beta-BHC (beta-Hexachlorocyclohexane)
	7250	Chlordane (tech.)
	7265	Chloroneb
	7310	Chlorthalonil (Daconil)
	7105	delta-BHC
	7470	Dieldrin
	7510	Endosulfan I
	7515	Endosulfan II
	7520	Endosulfan sulfate:
	7540	
	7530	Endrin aldehyde
	7535	Endrin Endrin aldehyde Endrin ketone Etridiazole
	7575	Etridiazole
	7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
	7245	gamma-Ghlordane
	7685	Heptassion
	7690	Heptachlor epoxide
	6275	
	4730	Hexachlorobenzene
	6285	Hexachlorocyclopentadiene
	7810	Methoxychlor
	7975	Permethrin (total)
	8045	Propachler (Ramrod)
	8250	Toxaphene (Chlorinated camphene)
	8295	Trifluralin (Freflan)
PA 8082		10179007 Polychlorinated Biphenyls (PCBs) by GC/ECD
	Analyte Code	Analyte
	8880	Aroclor 1016 (PCB-1016)
	8885	Aroclor=1221 (PCB-1221)
	8890	Arodor 1232 (PGB-1232)
	8895	Arcelor-1242 (PGB-1242)
		Aroclor-1248 (PCB-1242)
	8900	
	8905	Aroclor-1254 (PCB-1254)
	8910	Aroclor-1260 (PCB-1260)
PA 8082A		10179201 Polychlorinated Biphenyls (PCBs) by GC/ECD
PA 8082A		
PA 8082A	Analyte Code	Analyte
PA 8082A	Analyte Code 8880	
PA 8082A		Analyte
PA 8082A	8880	Analyte Aroclor-1016 (PCB-1016)
PA 8082A	8880 8885	Analyte Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232)
PA 8082A	8880 8885 8890 8895	Analyte Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242)
PA 8082A	8880 8885 8890 8895 8900	Analyte Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242) Aroclor-1248 (PCB-1248)
PA 8082A	8880 8885 8890 8895 8900 8905	Analyte Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242) Aroclor-1248 (PCB-1248) Aroclor-1254 (PCB-1254)
PA 8082A	8880 8885 8890 8895 8900	Analyte Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242) Aroclor-1248 (PCB-1248)

Analyte Code	Analyte
7075	Azinphos-methyl (Guthion)
7125	Bolstar (Sulprofos)
7300	Chlorpyrifos
7315	Coumaphos
7395	Demeton-o
7385	Demeton-s
7410	Diazinon
8610	Dichlorovos (DDVP, Dichlorvos)
7475	Dimethoate

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

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Analyte Code	Analyte
8625	Disulfoton
7550	EPN
7570	Ethoprop
7600	Fensulfothion
7605	Fenthion
7770	Malathion
7785	Merphos
7825	Methyl parathion (Parathion, methyl)
7850	Mevinphos
7905	Naled
7955	Parathion, ethyl
7985	Phorate
8110	Ronnel
8155	Sulfotepp
8200	Tetrachlervinghes (Stirophos, Gardona) Z-isomer
8210	Tetraethyl pyrophosphate (TEPP)
8245	Tokulhicin (Prothiophos)
8275	Trichloronate

EPA 8141B

10182204

Organophosphorous Pesticides by GC/NPD

///	
Analyte Code	Analyte
7075	Azinphos-methyl (Guthion)
7125	Bolstar (Sulprofos)
7300	Chlorpyrifos
7315	Coumaphos
7395	Demeton-o
7385	Demeton-s
7410	Diazinon
8610	Dichlorovos (DDVP, Dichlorvos)
7475	Dimethoate
8625	Disulfoton
7550	EPN
7570	Ethoprop
7600	Fensulfothion
7605	Fenthion
7770	Malathion
7785	Merphos
7825	Methyl parathion (Parathion, methyl)
7850	Mevinphos
7905	Naled
7955	Parathion, ethyl
7985	Phorate
8110	Ronnel
8155	Sulfotepp
8200	Tetrachlorvinphos (Stirophos, Gardona) Z-isomer
8210	Tetraethyl pyrophosphate (TEPP)
8245	Tokuthion (Prothiophos)

EPA 8151A

8275

10183207

Trichloronate

Chlorinated Herbicides by GC/ECD

Analyte Code	Analyte
8655	2,4,5-T
8545	2,4-D
8560	2,4-DB
8555	Dalapon
8595	Dicamba
8605	Dichloroprop (Dichlorprop)
8620	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)
7775	MCPA

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

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 Analyte Code	Analyte	
 7780	MCPP	
8650	Silvex (2,4,5-TP)	

EPA

and trap GC/MS

8260B		10184802	Volatile Organic Compounds by purge an
	Analyte Code	Analyte	
	5105	1,1,1,2-Tetrachloroethane	
	5160	1,1,1-Trichloroethane	
	5110	1,1,2,2-Tetrachloroethane	AND THE SAME SHOULD SEE THE
	5195	1,1,2-Trichloro-1,2,2-triffuero	ethane (Freon 113). Silver,
	5165	1,1,2-Trichlorgethane	RECOGAL
	4630	1,1-Dichloroethane	
	4640	1, 1-Dighton sethy(c) for a fitter.	
	4670	1.14 อิโรกโลก เพื่อสืบแระเป็นสาร	自由于1000年1000年 1000年100日,
	5150	decale domination	
	5180	A234 in this course	
	5155	12 a Trialinorarzene	
	5210	1, 2,4-Transmylberzene	
	4570		(DBCP
	4585	. (j.2.19) kompethana (j.2.118). Et	
	4610	. 12:Dich cobenzene	
	4635		r dichionide
	4655	-12-Didiorogopara	
	5215	1251 helpyberszine	
	4615	1.3-Dichio coenzene	
	4660	. (Š. Š) air jo kaundijalija (š. 1731)	
	4620	14 Dienlorgeenzene	
	4735	1 4-Dioxane 1 4 Diethy ene	
	6380	i Neirvinaportalene	
	5220	- E. 2.4 insmetrytophiane	
	4665	The state of the s	
	4410	2 Balancina Vietnyl chyl ka	an, ipezopiani nesiani nesiani nesiani n
	4500	20 Tojas vBroviecas	
	4535	2-Cir arate demand	
	4860	2-Hox: (1972)	
	6385	2-Methylnaphthalanau	
	5020	2-Nitroproparie	
	6103	3,3'-dimethyl-1-butanol	
	4540	4-Chlorotoluene	
	4910	4-Isopropyltoluene (p-Cymer	
	4995	4-Methyl-2-pentanone (MIBK	· ·
	4315	Acetone	y .
	4320	Acetonitrile	
	4325	Acrolein (Propenal)	
	4340	Acrylonitrile	
	4355	Allyl chloride (3-Chloroprope	no)
	4375	Benzene	(IIC)
	4385	Bromobenzene	
	4390	Bromochloromethane	
	4395	Bromodichloromethane	
	4397	Bromoethane (Ethyl Bromide	1
	4400	Bromoform	·)
	4450	Carbon disulfide	
	4455	Carbon tetrachloride	
	4475	Chlorobenzene	
	4475 4575	Chlorodibromomethane	
	4485	Chloroethane (Ethyl chloride	1
	4505	Chloroform	7)
	4505 4525	Chloroprene (2-Chloro-1,3-b	utadiana)
	4645	cis-1,2-Dichloroethylene	utaulene)
	4680		
	4000	cis-1,3-Dichloropropene	

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte
4600	cis-1,4-Dichloro-2-butene
4555	Cyclohexane
4560	Cyclohexanone
4580	Dibromochloropropane
4595	Dibromomethane (Methylene bromide)
4625	Dichlorodifluoromethane (Freon-12)
4725	Diethyl ether
9375	Di-isopropylether (DIPE)
4750	Ethanol A Decision of the Control of
4755	Ethyl acetate
4810	Ethyl methacrylate
4765	Ethyl methacylate Ethylbergene Ethyl-t-butylether NE Field (2-Etrioxy-2-metry) properey Hexachlorophitadignar Hexachlorophitalia
4770	Ethyl-Moutylethe at Title) (21-thoxy/2/man), provide)
4835	Hexachlorokutadi c har
4840	Hexachlercettiane
4870	(Jadometra in Afficiary) (or tae)
4875	/ Isobew alcohol (2 Methy 4 propand)
4895	, Isoprofes alcohol (2-Propano), isoprovanol)
4900	Isopropy Benzena
4925	Methacrylor trile
4940	Methyl acetate
4945	Methyl acrylate i
4950	Methyl bromide (Bromomethane)
4960	Methyl coloride (Chloromethane)
4990	Methyl methacry are
5000	Methyl fert-butyl ether (MTBE)
4965	Methylorophexare
4975	Methylene chipside (Dich arsmethane;
5245	m-Xylena
5005	Nachthalene 🔝 🚵
4425	n-Burylla cofret (1-Butano, n-Butano)
4435	n-Butyllenzche
4855	aries and a street of the stre
5025	n-Nitroso consexy lagine
5090	n-Propylburizone
5250 5035	o-Xylene Pentachloroethane
5035 5080	Propionitrile (Ethyl cyanide).
5255	p-Xylene
4440	sec-Butylbenzene
5100	Styrene
4370	T-amylmethylether (TAME)
4368	tert-amyl alcohol
4420	tert-Butyl alcohol
4445	tert-Butyl alcohol
9557	tert-butyl-formate
5115	Tetrachloroethylene (Perchloroethylene)
5120	Tetrahydrofuran (THF)
5140	Toluene
4700	trans-1,2-Dichloroethylene
4685	trans-1,3-Dichloropropylene
4605	trans-1,4-Dichloro-2-butene
5170	Trichloroethene (Trichloroethylene)
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)
5225	Vinyl acetate
5235	Vinyl chloride
5260	Xylene (total)

ORELAP ID: TN200002

EPA CODE: TN00003

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EPA 8260C

Volatile Organics: GC/MS (capillary column)

A 8260C		1030700 <u>3</u> Vo	latile Organics: GC/MS (capillary colum
	Analyte Code	Analyte	
	5105	1,1,1,2-Tetrachloroethane	:
	5160	1,1,1-Trichloroethane	
	5110	1,1,2,2-Tetrachloroethane	
	5195	1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	eon 113)
	5165	1,1,2-Trichloroethane	e de la companya de l
	4630	1,1-Dichloroethane	With the same of t
	4640	1,1-Dichloroethylene	
	4670 5150	1,1-Dichloropropene	CO _{G///}
	5150 5180	1,2,3-Trick propropal et	
	5155	1,2,4471@1101000.1011	
	5210	1,24-Jrimethyloenzene	
	4570	(P2: Fire too a sufficience agency (URCP)	
	4585	A 124 Digeograph interior (EDE). Ethylorio Elio	romide)
	4610	1,2 Combroberzene	
	4635	1.2-DigNordemane (Etnylene dichlorid)	
	4655	. 1.2-Dichleroprouzne	
	5215	1 3 5 Trimetry cenzene	
	4615	1.3-Didhiorobenzene	
	4660	1.3.10 Chiese cropshie	
	4620 4735	1.4 Dich sickle stene 1.4 Dickers v12 Diethylenebylde	Acceptance of the second second
	6380	1-Metry napothalene	
	5220	2.2.4.Trimethylpentarie	
	4665	2.2-Dichiotopionane	
	4410	P. 2 Buenone Workshipt febre. West	
	4500		
	4535	ui. 2-Cropa t pene	
	4860	2 few none.	
	5145	2-Moin (e.) De (locifolhishe)	and the second s
	6385	2-Methylrachulaiche	
	5020	2-Nijnopropis e	
	4540 4910	4-Chlocololuene (p. 24m sne)	
	4995	4-Methyl-2-pentanone (MIBK)	
	4315	Acetone	
	4320	Acetonitrile	
	4325	Acrolein (Propenal)	
	4340	Acrylonitrile	
	4355	Allyl chloride (3-Chloropropene)	
	4375	Benzene	
	4385	Bromobenzene	
	4390	Bromochloromethane	
	4395	Bromodichloromethane	
	4397 4400	Bromoethane (Ethyl Bromide) Bromoform	
	4450	Carbon disulfide	
	4455	Carbon tetrachloride	
	4475	Chlorobenzene	
	4575	Chlorodibromomethane	
	4485	Chloroethane (Ethyl chloride)	
	4505	Chloroform	
	4525	Chloroprene (2-Chloro-1,3-butadiene)	
	4645	cis-1,2-Dichloroethylene	
	4680	cis-1,3-Dichloropropene	
	4600 4555	cis-1,4-Dichloro-2-butene	
	4560	Cyclohexane Cyclohexanone	
	4000	Сусіопеханопе	

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

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TN 37122

Issue Date:

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Expiration Date: 01/15/2013

Expiration Dates on 10/2010

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Analyte C	ode Analyte
4580	Dibromochloropropane
4595	Dibromomethane (Methylene bromide)
4625	Dichlorodifluoromethane (Freon-12)
4725	Diethyl ether
9375	Di-isopropylether (DIPE)
4750	Ethanol
4755	Ethyl acetate
4810	Ethyl methacrylate
4765	Ethylbenzene
4770	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)
4835	Hexachlorobutadiene P
4840	Hexachlorgethane
4870	Indometrica // Services
4875	Iodomethane (Methyl colide)
	Isobutyl alcahol ((#Methyl-1-propend) Isopropyl alcahol (2-Propend), Isopropand)
4895	Isosropy recent (24 robshol, isobropano)
4900)sopropy/septene
4925	Hexachlorobutadiene Hexachloroethane Iodométhane (Methyricoide) Isobutyl albahol (2-folethyl-1-propanol) Isopropytaloshar (2-fropanol, Isopropanol) Isopropytaloshare Methyricolate Methyricalate Methyricalate
4940	
4945	Methyl acrylete
4950	Methyl promide (Bromomethane)
4960	Methyl chlonde (Chloromethane)
4990	Methy, methacrylate
5000	Methyl temburyl ether (VTBE)
4965	Methylogalonexane
4975	Methylene choride (Dichloromethane)
5245	m-Xyare
5005	Nachthalène
4425	n-Butyl a como (1-Butanol n-Butanon
4435	n-Rutylbergene 13 1 1 1 1 1
5015	
5025	Nitrobassene n-Nitroso _s n-h-butylamine
5090	n-Propyloenzene
5250	c-Xviene
5035	Pentachio detastes
5080	Propionitrile (Ethylley arree).
5255	p-Xylene
6685	Safrole A A A A B B B
4440	sec-Butylbenzeite
5100	Styrene ######
4370	T-amylmethylether (TAME)
4420	tert-Butyl alcohol
4445	tert-Butylbenzene
5115	Tetrachloroethylene (Perchloroethylene)
5120	Tetrahydrofuran (THF)
5140	Toluene
4700	trans-1,2-Dichloroethylene
4685	trans-1,3-Dichloropropylene
4605	trans-1,4-Dichloro-2-butene
5170	Trichloroethene (Trichloroethylene)
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)
5225	Vinyl acetate
5235	Vinyl abotate Vinyl chloride
5260	Xylene (total)
0200	

EPA 8270C

10185805

Semivolatile Organic compounds by GC/MS

 Analyte Code	Analyte	
6703	1,1'-Biphenyl (BZ-0)	
6705	1,2,3,4-Tetrachlorobenzene	
6710	1,2,3,5-Tetrachlorobenzene	
6715	1,2,4,5-Tetrachlorobenzene	

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

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01/16/2012

Expiration Date: 01/15/2013

01/13/2013

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Analyte Code	Analyte
5155	1,2,4-Trichlorobenzene
4610	1,2-Dichlorobenzene
6221	1,2-Diphenylhydrazine
6885	1,3,5-Trinitrobenzene (1,3,5-TNB)
4615	1,3-Dichlorobenzene
6160	1,3-Dinitrobenzene (1,3-DNB)
4620	1,4-Dichlorobenzene
6420	1,4-Naphthoquinone
5790	1-Chloronaphthalene
6380	1-Methylnaphthalene
6425	1-Naphthylamine 2,3,4,6-Tetrachicrophenal 2,4,5-Trichicrophenal 2,4,6-Trichicrophenal 2,4-6-Trichicrophenal 3,4-Dichicrophenal
6735	2,3,4,6-Tetrachloropheriol
6835	2,4,5-Trichloroph agol
6840	2,4.6-Trichiaropranion
6000	2,4 Dichlargomendi
6130	
6175	2,4 9 autiopheral
6185	2.4-Diffrotofuerie (2.4-DNT)
6005	2,6-Dichloropherol
6190	2.6 Dinitrotoluene (2.6 DNT)
5515	2-Acetylaminofluorene
5795	2-Chlosonaththalene
5800	2 Chicrophient
6360	2.Methy -4.6-cinitrograma (4.6-Dinitro-2-methylphenol)
5145	2-Metry amiline (q-Toiu dine)
6385	2.Methymap ithalene
6400	2-Methy bhenot (o-Cresol)
6430	24Naphthy amine
6460	2-Nitroan ine
6490	2-Nitrophenal
5050	2-Picone (2-Methyloyridine)
5945	3.3'-Didhlor-benzidine
6120	3.3-Dimethy begzitine
6355	3-Methylcholanculare
6465	3-Nitroaniline
5540	4-Aminob phenyl
5660	4-Bromopheny, shenyl ether # # * * * * * * * * * * * * * * * * *
5700 5745	4-Chloro-3-methylphenol
5745	4-Chloropaniine
5825	4-Chlorophenyl phenylether
6105 6410	4-Dimethyl aminoazobenzene
6470	4-Methylphenol (p-Cresol) 4-Nitroaniline
6500	
6510	4-Nitrophenol 4-Nitroquinoline 1-oxide
6570	5-Nitro-o-toluidine
6115	7,12-Dimethylbenz(a) anthracene
9417	7h-Dibenzo(c, g) carbazole
6125	a-a-Dimethylphenethylamine
5500	Acenaphthene
5505	Acenaphthylene
5510	Acetophenone
5545	Aniline
5555	Anthracene
5560	Aramite
7065	Atrazine
5565	Atrazine Benzal chloride
5570 5505	Benzaldehyde Benzidine
5595 5575	
5575	Benzo(a)anthracene

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte
5590	Benzo(g,h,i)perylene
9309	Benzo(j)fluoranthene
5600	Benzo(k)fluoranthene
5585	Benzo[b]fluoranthene
5610	Benzoic acid
5625	Benzotrichloride
5630	Benzyl alcohol
5635	Benzyl chloride
5760	bis(2-Chloroethoxy)methane
5765	bis(2-Chloroethyl) ether bis(2-Chloroisopropyl) ether bis(2-Chloroisopropyl) ether Butyl benzyl phthalate Caprolactam Carbazole Chlorobenz Ree Chlorosen
5780	bis(2-Chloroisopropyl) ether
5670	Butyl benzyl phthelate
7180	Caprolactain
5680	Carbazole a
7260	Chiloropen late
5855	Chrysene Di(2-alk-kexyl) orthalate /bis/2-Ethylhexyllohthalate DEHP
6065	
7405 9354	Dialiate. Dibenzia hij acridine
5900	Diberizia il acridine
5895	Dibenz(a.h) anthracene
9348	Diberzo(a, h) pyrene
9351	Dibenzola, / pyrene
5890	Dibenzora et pyrene
5905	Dibenzefuran
6070	Diethyl phthalate
7475	Directlypate A Section 1
6135	Dimethyl pathalate
5925	Di-n-butyi phthalate
6200	Di-n-colal obticalate
8620	Dings to 12 sec-butyl-4 8-a nitrophenol. SINER
6205	Diphendampe
8625	Disulfolon
6260	Ethyl methar equitorate:
7580	Fampour 1995
6265	Fluoranthene
6270	Fluorene A A A A A A A A A A A A A A A A A A
6275	Hexachlorobenzene
4835	Hexachiorobutadiene
6285	Hexachlorocyclopentadiene
4840	Hexachloroethane
6290	Hexachlorophene
6295	Hexachloropropene
6315	Indeno(1,2,3-cd) pyrene
7725	Isodrin
6320	Isophorone
6325	Isosafrole
7740	Kepone .
6345	Methapyrilene
6375	Methyl methanesulfonate
7825	Methyl parathion (Parathion, methyl)
5005	Naphthalene
5875	n-Decane
5015	Nitrobenzene
6525	n-Nitrosodiethylamine
6530	n-Nitrosodimethylamine
5025	n-Nitroso-di-n-butylamine
6545	n-Nitrosodi-n-propylamine
6535	n-Nitrosodiphenylamine
6550	n-Nitrosomethylethalamine
6555	n-Nitrosomorpholine

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte
6560	n-Nitrosopiperidine
6565	n-Nitrosopyrrolidine
6580	n-Octadecane
8290	o,o,o-Triethyl phosphorothioate
7955	Parathion, ethyl
6590	Pentachlorobenzene
5035	Pentachloroethane
6600	Pentachloronitrobenzene
6605	Pentachlorophenol
6610	Phenacetin
6615	Phenanthrene Phenanthrene
6625	Phenol
7985	Phorate
9663	p-Phenylenediam ne
6650	Pronamide (Kerb)
6665	Pyrene
5095	Pyridine
6685	Safrole
8155	Sulfotepp
8235	Thionazin (Zinophos)

EP

MS

PA 8270D		10186002 Semivolatile Organic compounds by GC/M
٨	nalista Cada	Anglista
A	nalyte Code	Analyte
	6703	1,1'-Biphenyl (BZ-0)
	6705	1,2,3,4-Tetrachlorobenzene
	6710	1,2,3,5-Tetrachlorobenzene
	6715	1,2,4,5-Tetrachlorobenzene
	5155	1,2,4-Trichlorobenzene
	4610	1.2-Dishlorobenzene
	6221	1.2-Diönenvlhydrazine
	6885	1,3,5-Trinitropenzene (1,3,5-TNB)
	4615	1,3-Dichlorobenzene
	6160	1,3-Dinitrobenzene (4,3-DNB)
	4620	1,4-Dichlorobenzene
	6420	1,4-Naphthoquinone
	5790 6380	1-Chloronaphthalene
	6425	1-Methylnaphthalene
	6735	1-Naphthylamine 2,3,4,6-Tetrachlorophenol
	6835	2,4,5-Trichlorophenol
	6840	2,4,6-Trichlorophenol
	6000	2,4-Dichlorophenol
	6130	2,4-Dimethylphenol
	6175	2,4-Dinitrophenol
	6185	2,4-Dinitrotoluene (2,4-DNT)
	6005	2,6-Dichlorophenol
	6190	2,6-Dinitrotoluene (2,6-DNT)
	5515	2-Acetylaminofluorene
	5795	2-Chloronaphthalene
	5800	2-Chlorophenol
	6360	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)
	5145	2-Methylaniline (o-Toluidine)
	6385	2-Methylnaphthalene
	6400	2-Methylphenol (o-Cresol)
	6430	2-Naphthylamine
	6460	2-Nitroaniline
	6490	2-Nitrophenol
	5050	2-Picoline (2-Methylpyridine)
	5945	3,3'-Dichlorobenzidine
	6120	3,3'-Dimethylbenzidine

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EPA CODE: TN00003

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Analyte Code	Analyte
6355	3-Methylcholanthrene
6465	3-Nitroaniline
5540	4-Aminobiphenyl
5660	4-Bromophenyl phenyl ether
5700	4-Chloro-3-methylphenol
5745	4-Chloroaniline
5825	4-Chlorophenyl phenylether
6105	4-Dimethyl aminoazobenzene
6410	4-Methylphenol (p-Cresol) 4-Nitroaniline 4-Nitrophenol 4-Nitroquirioline 1-bxies 5-Nitro-o-toluidine 7, 12-Dimethylbenyter arithfeoane 7h-Dibenyter (overcarbazole a-a-Dimethylphenethylamine
6470	4-Nitroaniline
6500	4-Nitrophenol
6510	4-Nitroquinaline 1-oxigo
6570	5-Nitro o doluidine
	7,12-Dimetaylbeng(a) anthrepene
6115	7, PZ-MINER WORL RESIDENCE TO THE TOTAL TO THE TOTAL TOTAL TO THE TOTAL
9417	7h-Diberizo chur carbazole
6125	a-a-Discessyptienethylamine
5500	Accelerate energy
5505	Acenasithylene
5510	Acetophenone
5545	Antine
5555	Anthracene
5560	Aramite:
7065	Atraz ne
5565	Benza chloride
5570	Benza deliyde
5595	Berizigine.
5575	Benzo(alanthracene
5580	Benzo(a)pyrane
5590	Benzo(pin, iperviene
9309	Benzo/ii/Supranthene
5600	Benzokiluprantheng
5585	Benzoleh ugranthene
5610	Benzo c'agti
5625	Benzotrichler 4.2
5630	Benzyl algohol
5635	Benzyl chloride
5760	bis(2-Chloroethoxy)methane
5765	bis(2-Chloroethyl) ether
5780	bis(2-Chloroisopropyl) ether
5670	Butyl benzyl phthalate
7180	Caprolactam
5680	Carbazole
7260	Chlorobenzilate
5855	Chrysene
6065	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)
7405	Diallate
9354	Dibenz(a, h) acridine
5900	Dibenz(a, j) acridine
5895	Dibenz(a,h) anthracene
9348	Dibenzo(a, h) pyrene
9351	Dibenzo(a, i) pyrene
5890	Dibenzo(a,e) pyrene
5905	Dibenzofuran
6070	Diethyl phthalate
7475	Dimethoate
6135	Dimethyl phthalate
5925	Di-n-butyl phthalate
6200	Di-n-octyl phthalate
8620	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)
6205 8625	Diphenylamine Disulfoton
Xn / h	

ORELAP ID: TN200002

EPA CODE: TN00003

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Customers. Please verify the current accreditation standing with ORELAP.

Analyte Code	Analyte
6260	Ethyl methanesulfonate
7580	Famphur
6265	Fluoranthene
6270	Fluorene
6275	Hexachlorobenzene
4835	Hexachlorobutadiene
6285	Hexachlorocyclopentadiene
4840	Hexachloroethane
6290	Hexachlorophene
6295	
6315	Indeno(1,2,3-df) pyrene
7725	Isodrin
6320	isophgrane
6325	sosafrole .
7740	Hexachloropropens Indeno(1,2,3-od) pyrene Isodrin Isophgrane Isosafrole Kedone Methapynase
6345	Methapymane
6375	Metapagethanesuifonate
7825	Methy parathion (Parathion methyl)
5005	Naphthalene (3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
5875	n-Decane
5015	Nitropenzere
6525	n-Nitrosodietovlamine
6530	n-Nitrosodimetry amina
5025	n-Nitrosc-di-n-butylamine
6545	h Nitrosadi n-propylamine
6535	n-Nitrosodichenylamine
6550	n-Nitrosomothylethalamine
6555	n-Nitrosamorpho ine
6560	n-Nitrosociperidire
6565	
6580	n-Nitrosecytro roine n-Oatalecane
8290	p.o.a- felhy phospharothicate:
7955	Parathiot activity
6590	Pentachlorocal zahe.
5035	Pentachieroethere > > > > > > > > > > > > > > > > > >
6600	Pentachloronitrocenzena / TATT
6605	Pentachlorophenol
6610	Pentacritoroppenot
6615	Phenanthrene
6625	Phenol
7985	Phorate Phorates diaming
9663	p-Phenylenediamine
6650	Pronamide (Kerb)
6665	Pyrene
5095	Pyridine
6685	Safrole
8155	Sulfotepp
8235	Thionazin (Zinophos)

EPA 8310

10187607

Polynuclear Aromatic Hydrocarbons by HPLC/UV-VIS

Analyte Code	Analyte
5500	Acenaphthene
5505	Acenaphthylene
5555	Anthracene
5575	Benzo(a)anthracene
5580	Benzo(a)pyrene
5590	Benzo(g,h,i)perylene
5600	Benzo(k)fluoranthene
5585	Benzo[b]fluoranthene
5855	Chrysene

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

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TN 37122

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Analyte Code	Analyte	
5895	Dibenz(a,h) anthracene	
6265	Fluoranthene	
6270	Fluorene	
6315	Indeno(1,2,3-cd) pyrene	
5005	Naphthalene	
6615	Phenanthrene	
6665	Pyrene	

EPA 8330

10189807

Nitroaromatics and Nitramines by HPLC/UV-VIS

Analyte Code	Analyte
6885	1,3,5-Trinitrobenzene (1,3,5, PNB)
6160	1,3-Dinitrobenzene (18-DNB)
9651	2,4,6-Trinitrotoluene (2,4,6-TNT)
6185	2,4-Dinitrotolujene (2,4-DNT)
6190	2,6-Dinitrotoluene (2,6-DNT)
9303	2-Amino 4,6-dinitrotoluene (2-am-dnt)
6462	2-Nitroguanidine
9507	2-Nitrotoluene
9510	3-Nitrotoluene
9306	4-Amino-2,6-dinitrotoluene (4-am-dnt)
9513	4-Nitrotoluene
6415	Methyl-2,4,6-trinitrophenylnitramine (tetryl)
5015	Nitrobenzene
6485	Nitroglycerin
9522	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
9558	Pentaerythritoltetranitrate
9432	RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine)

EPA 8330A

10190008

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Analyte Code	Analyfe
6885	1,3,5-Trinifrobenzene (1.3,5-TNB)
6160	1,3-Dinitrobenzene (4,3-DNB)
9651	2,4,6-Trinitrotoluene (2,4,6-TNT)
6185	2,4-Dinitrotoluene (2,4-DNI)
6190	2,6-Dinitrotoluene (2,6-DNT)
9303	2-Amino-4,6-dinitrotoluene (2-am-dnt)
9507	2-Nitrotoluene
9510	3-Nitrotoluene
9306	4-Amino-2,6-dinitrotoluene (4-am-dnt)
9513	4-Nitrotoluene
6415	Methyl-2,4,6-trinitrophenylnitramine (tetryl)
5015	Nitrobenzene
6485	Nitroglycerin
9522	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
9558	Pentaerythritoltetranitrate
9432	RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine)

EPA 9010B

10193007

Total and Amenable Cyanide by Distillation and UV-Vis

Analyte Code	Analyte	
1510	Amenable cyanide	
1645	Total cyanide	

EPA 9010C

10243002

Total and Amenable Cyanide by Distillation and UV-Vis

Analyte Code	Analyte
1510	Amenable cyanide
1645	Total cyanide

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

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EPA 9012A			10193405	Total and Amenable Cyanide (automated colorimetric with off-line distillation)
	Analyte Code	Analyte		•
<u> </u>	1645	Total cyanide		
EPA 9012B			10243206	Total and Amenable Cyanide (automated colorimetric with off-line distillation)
	Analyte Code	Analyte		
	1645	Total cyanide		
EPA 9020B	Wil (),		10194408	Total Organic Halides
	Analyte Code	Analyte		<u> </u>
	2045	Total organic	halides (TOX)	
EPA 9030B	CONTROL PROPERTY AND ADMINISTRATION OF THE PROPERTY		10195605	Acid-Soluble and Acid-Insoluble sulfides: Distillation
	Analyte Code	Analyte [®]	100	
	2005	Sulfide	-	
EPA 9034			10196006	Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides
-	Analyte Code	Analyte		
	2005	Sulfide		December
EPA 9040B		8 9 P	10197203	pH Electrometric Measurement
	Analyte Code	Analyte	30	Action and the Late of the Control o
	1900	pН		
EPA 9050A		477	10198808	Specific Conductance
		7.0%		
***	Analyte Code	Analyte	٠,	
	1610	Conductivity	Mr.	
EPA 9056			10199403	Determination of Inorganic Anions by Ion Chromatography
-	Analyte Code	Analyte		
	1540 1575	Bromide Chloride		
	1730	Fluoride		
	1810	Nitrate as N		
	1840	Nitrite as N		
	2000	Sulfate	Marking a few and a second	
EPA 9056A	*.		10199607	Determination of Inorganic Anions by Ion Chromatography
	Analyte Code	Analyte		
	1540	Bromide		
	1575 1730	Chloride Fluoride		
	1805	Nitrate		
	1835	Nitrite		
	2000	Sulfate		
EPA 9060	Michigan Communication Communi		10200201	Total Organic Carbon
	Analyte Code	Analyte		
	2040	Total organic	carbon	
		-		

ORELAP ID: TN200002

EPA CODE: TN00003

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EPA 9060A			10244801	Total Organic Carbon
	Analyte Code	Analyte		
	2040	Total organi	c carbon	
EPA 9066			10200609	Phenolics (Colorimetric, Automated 4-AAP with Distillation)
	Analyte Code	Analyte		
	1905	Total pheno	lics	
EPA RSK-1	75 (GC-TCD)		10212858	Fixed Gases in water by Headspace GC/TCD
	Analyte Code	Analyte	a n	RECO _G
	3755	Carbon diox	ide	- VA.
	4747	Ethane	W	
	4752 4926	Éthene	<i>,</i> *	
	4920	Methane		
NWTPH-Dx		***	90018409	Oregon DEQ TPH Diesel Range
	Analyte Code	Analyte		
-	9369		organics (DRO)	
	0000	Dicoci range		
NWTPH-Gx			90018603	Oregon DEQ TPH Gasoline Range Organics by GC/FID-PID Purge & Trap
	Analyte Code	Analyte		TAP
	9408	A CONTRACTOR CONTRACTOR OF CONTRACTOR CONTRA	ige organics (GR0))
WTPH-HC	n i		90013200	Oregon DEQ Total Petroleum Hydrocarbon ID
111111111111111111111111111111111111111			30010200	Gregor DE Grotar repoleum riyarocarbon ib
	Analyte Code	Analyte		
	2050	Total Petrole	um Hydrocarbons	s (TPH)
DA-1			90013802	lowa TPH Gx by GC/RID Purge & Trap
			MCK.	
	Analyte Code	Analyte	* / / / /	ration /
	9408	Gasoline rar	ige organics (GR)),
DA-2			90014009	lowa TPH Dx
	Analyte Code	Analyte		- Communication of the Communi
	9369		organics (DRO)	
SM 2120 B 2	oth ED		20224004	Color by Visual Comparison
				,
	Analyte Code	Analyte		
	1605	Color		
SM 2130 B 2	oth ED		20042404	Turbidity by Nephelometric Determination
	Analyte Code	Analyte		
-	2055	Turbidity		
SM 2310 B 2	Oth ED		20044206	Acidity by Titration
	Analyte Code	Analyte		

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SM 2320 B 20th ED		20045209	Alkalinity by Titration	
Analyte Code	Analyte			
1505	Alkalinity as	CaCO3		-
SM 2340 B 20th ED		20046202	Hardness by calculation	
Analyte Code	Analyte	÷		and the second
1750	Hardness		6.500 Selection Co. Action Co.	
SM 2510 B 20th ED		20048208	Conductivity by Probe	
Analyte Code	Analyte Conductivity	_		-
SM 2540 B 20th ED	- Conjugation in	20049007	Total Solids	
SW 2340 B 2011 ED		20045001	Total Solius	
Analyte Code	Analyte			.
1950	Residue-tota			
SM 2540 C 20th ED		20050004	Total Dissolved Solids	
Analyte Code	Analyte			
1955	Residue-filte	rable (TDS)		-
SM 2540 D 20th ED		20050800	Total Suspended Solids	
Analyta Cada	Analyte	500		
Analyte Code		filterable (TSS)		-
SM 2540 F 20th ED	14 (*)	20051803	Settleable Solids	
Analyta Codo	Analysa			
Analyte Code 1965	Analyte Residue-sett	leåble		
SM 2540 G 20th ED		20005258	Total, Fixed, and Volatile Solids	s in Solid and Semisolid Samples
Amalusta Carla	Amalista			•
Analyte Code	Analyte Total, fixed, a	and volatile residue		_
SM 3500-Fe B 20th ED		20068604	Iron by Colorimetric Method	
Analyta Cada	Analuta			
Analyte Code	Analyte Iron		· · · · · · · · · · · · · · · · · · ·	
SM 4110 B 20th ED		20076602	Anions by Ion Chromatography	with Chemical Suppression of Eluent
Analyta Cada	Analyte			
Analyte Code 1575	Chloride			-
1730	Fluoride			•
1810	Nitrate as N			
1820	Nitrate-nitrite)		
1840	Nitrite as N			
2000	Sulfate		THE STREET AND A STREET AND A STREET AND A STREET ASSESSMENT ASSESSMENT AND A STREET ASSESSMENT ASS	
SM 4500-CI G 20th ED		20081203	Residual Chlorine by DPD Colo	primetric Determination
Analyte Code	Analyte			
1940	Total residua	al chlorine		

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SM 4500-CN C 20th ED		20091605	Cyanide, Total After Distillation
Analyte Code	Analyte		
1635	Cyanide		-
SM 4500-CN E 20th ED		20092404	Cyanide by Colorimetric Determination
Analyte Code	Analyte		
1635	Cyanide		notice that the state of the st
1645	Total cyanide		
SM 4500-CN G 20th ED	1	20093203	Cyanide Amenable to Chlorination after Distillation
Analyte Code	Analyte	κV^{\dagger}	
1510	Amenable cy	anide	
SM 4500-H+ B 20th ED		20104807	pH by Probe
OIII 4000-111 B 20111 LB		20104001	pri by 1 1000
Analyte Code	Analyte	-	
1900	pН		
SM 4500-NH3 B 20th ED		20105606	Ammonia Nitrogen Distillation
Analyte Code	Analyte		
1515	Ammonia as	V	
SM 4500-NH3 G 20th ED		20111006	Ammonia by Automated Phenate
OIII 4000-I II IO O ZOLII EB		20111000	Filmonia by Pademates, mende
Analyte Code	Analyte		
1515	Ammonia as l	V	
SM 4500-NO3 F 20th ED	1//	20116205	Nitrate Nitrogen by Automated Cadmium Reduction Method
Analyte Code	Analyte	λ.	
1820	Nitrate-nitrite	TALK.	The state of the s
SM 4500-Norg C 20th ED	•	20119602	Nitrogen (Organic) by Semi-micro Kjeldahl Method
-			
Analyte Code	Analyte		
1790 1795	Kjeldahl nitrog Kjeldahl nitrog		
SM 4500-O C 19th ED		20120201	Dissolved Oxygen by Azide Modification
OM 4000-0 0 15th LD		20120201	Dissolved Oxygen by Azide modification
Analyte Code	Analyte		
1880	Oxygen, disso	olved	
SM 4500-O G 20th ED		20121204	Dissolved Oxygen by Membrane Electrode Method
Analyte Code	Analyte		
1880	Oxygen, disso	olved	
SM 4500-P B 5 20th ED	'	20123200	Phosphorus by Persulfate Digestion Method
Analyte Code	Analyte		
1910	Phosphorus, t	otal	
SM 4500-P E 20th ED		20123802	Phosphorus by Ascorbic Acid Reduction
Analyta Cada	Anglista		
Analyte Code	Analyte		

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Analyte Code	Analyte	·
1870 1910	Orthophosphate as P Phosphorus, total	
SM 4500-S2 D 20th ED	20125400	Sulfide by Methylene Blue Method
Analyte Code	Analyte	
2005	Sulfide	
SM 4500-SO3 B 20th ED	20130205	Sulfite by lodometric Method
Analyte Code	Analyte 🙀	AFA-
2015	Sulfite-SO3	
SM 5210 B 20th ED	20134809	Biochemical Oxygen Demand, 5-Day (BOD5)
Analyte Code	Analyte	
1530 1555	Biochemical oxygen demand Carbonaceous BOD, CBOD	
SM 5220 D 20th ED	20136407	Chemical Oxygen Demand by Closed Reflux and Colorimetric
		Determination
Analyte Code	Analyte	
1565	Chemical oxygen demand	
SM 5310 B 20th ED	20137400	Total Organic Carbon by Combustion Infra-red Method
Analyte Code	Analyte	10 m
2040	Total organic carbon	
SM 5310 C 20th ED	20138403	Total Organic Carbon by Persulfate-Ultraviolet Oxidation Method
Analyte Code	Analyte	
2040	Total organic carbon	
SM 5320 B 20th ED	20140403	Absorbable Organic Halogen
Analyte Code	Analyte	IAINA
2045	Total organic halides (TOX)	
SM 5520 B 20th ED	20141202	Oil and Grease by Extraction and Gravimetric Determination
Analyte Code 1860	Analyte Oil & Grease	
SM 5540 C 20th ED	20144609	Surfactants as MBAS
Analyte Code	Analyte	
2025	Surfactants - MBAS	
SM 6200 B 20th ED	20146605	Volatile Organic Compounds by purge and trap GC/MS
Analyte Code	Analyte	
5105	1,1,1,2-Tetrachloroethane	
5160	1,1,1-Trichloroethane	
5110	1,1,2,2-Tetrachloroethane	
5195	1,1,2-Trichloro-1,2,2-trifluoro	ethane (Freon 113)
5165	1,1,2-Trichloroethane	
4630	1,1-Dichloroethane	
4630 4640	1,1-Dichloroethane 1,1-Dichloroethylene	

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Analyte Code	Analyte
5150	1,2,3-Trichlorobenzene
5180	1,2,3-Trichloropropane
5182	1,2,3-Trimethylbenzene
5155	1,2,4-Trichlorobenzene
5210	1,2,4-Trimethylbenzene
4570	1,2-Dibromo-3-chloropropane (DBCP)
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)
4610	1,2-Dichlorobenzene
4635	1,2-Dichloroethane (Ethylene dichlorde)
4655	1,2-Dichloropropane
5215	
4615	1,3,5-Trimethylbenzene
	1,3-Dichloroberizene
4660	1,3-Didhlatopropaka 🔻 🌯 💮 💮 💮
4620	1,4-Dichloropenzene
4735	1,4-Dloxafie (N.A. Diethyleneoxide)
4665	2.2-Dichlarogropane
4410	
4500	2-Ch chaethy vinyl ether
4535	2-Chorotouene
4860	2-Hexarione
4540	4-Chloropuere
4910	4-Jsocropyholisere (o-Cymene)
4995	4-Methy 2 pentanone (M/BK)
4315	Acetorie
4320	Aceton trile
4325	Acrolein (Property)
4340	Acrylonitrile
4355	Allyl chlorige (3-Chlorophopene)
4375	Benzene
4385	Bromaaenzene
4390	Bromos loromethane
4395	Bromodichioromethane
4398	Bromoethere
4400	
	Bromoform
4450	Carbon disultion
4455	Carbon tetrachloride
4475	Chlorobenzene
4575	Chlorodibromomethane
4485	Chloroethane (Ethyl chloride)
4505	Chloroform
4525	Chloroprene (2-Chloro-1,3-butadiene)
4645	cis-1,2-Dichloroethylene
4680	cis-1,3-Dichloropropene
4600	cis-1,4-Dichloro-2-butene
4560	Cyclohexanone
4595	Dibromomethane (Methylene bromide)
4625	Dichlorodifluoromethane (Freon-12)
4725	Diethyl ether
9375	Di-isopropylether (DIPE)
4750	Ethanol
4755	Ethyl acetate
4810	Ethyl methacrylate
4765	Ethylbenzene
4770	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)
4835	Hexachlorobutadiene
4870	lodomethane (Methyl iodide)
4875	Isobutyl alcohol (2-Methyl-1-propanol)
4895	Isopropyl alcohol (2-Propanol, Isopropanol)
4900	Isopropylbenzene
4925	Methacrylonitrile
4950	Methyl bromide (Bromomethane)

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Anai	yte Code	Analyte		
	4960	Methyl chloride (Chlorometh	hane)	
4	4990	Methyl methacrylate		
	5000	Methyl tert-butyl ether (MTB	BE)	
4	4975	Methylene chloride (Dichloro		
	5245	m-Xylene	·	
	5005	Naphthalene		
	4435	n-Butylbenzene		
	4855	n-Hexane		
	5090			
		n-Propylbenzene		
	5250	o-Xylene	RECOGNA	
	5035	Pentachloroethane		
	5080	Propionitrile (Ethyl cyanide)		
	5255	p-Xylene		
	4440	sec-Butylbenzene		
	5100	Styrene		
	4370	T-amylmethylether (TAME)		
	4420 🔏	tert-Butyl alcohol		
	4445	tert-Bullylbenzene		
	5115	Tetrachloroethylene (Perchi	nloroethylene)	
	5120	Tetrahydrofuran (THF)		
	5140	Toluene		
	4700	trans-1,2-Dichloroethylene		
	4685	trans-1 3-Dichloropropylene		
*	4605	trans-1.4-Dichloro-2-butene		
	5170	Trichloroethene (Trichloroet		
	9570096067559096			
	5175		uorotrichloromethane, Freon 11)	
	5225	Vinyl acetate		
	5235	Vinyl chloride		
	5260	Xylene (total)		
85 COOO O OO41- EI	_			
M 6200 C 20th El)	20147200	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
	yte Code	Analyte	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375	Analyte Benzene	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375 4765	Analyte Benzene Ethylbenzene	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375	Analyte Benzene	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ap
Anal	yte Code 4375 4765	Analyte Benzene Ethylbenzene	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375 4765 5000	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTS	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375 4765 5000 4420	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	ар
Anal	yte Code 4375 4765 5000 4420 5140 5260	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene	Volatile Aromatic Organic Compounds by GC/PID Purge & Tra	
Anal M 6630 B 20th El	yte Code 4375 4765 5000 4420 5140 5260	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total)	FATION 80	
Anal M 6630 B 20th El	lyte Code 4375 4765 5000 4420 5140 5260	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total)	FATION 80	
Anal M 6630 B 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte	FATION 80	C/ECD
Anal W 6630 B 20th El Anal W 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan)	Organochlorine Pesticides by Liquid/Liquid Extraction and Googanochlorine Pesticides and PCBs by Liquid/Liquid Extrac	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D lyte Code 8295 D	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte	Organochlorine Pesticides by Liquid/Liquid Extraction and Googanochlorine Pesticides and PCBs by Liquid/Liquid Extrac	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D lyte Code 8295 D lyte Code 7355	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD	Organochlorine Pesticides by Liquid/Liquid Extraction and Googanochlorine Pesticides and PCBs by Liquid/Liquid Extrac	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D lyte Code 8295 D lyte Code 7355 7360	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE	Organochlorine Pesticides by Liquid/Liquid Extraction and Googanochlorine Pesticides and PCBs by Liquid/Liquid Extrac	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 D lyte Code 8295 D lyte Code 7355 7360 7365	Analyte Benzene Ethylbenzene Methyl tert-butyl ethel (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT	Organochlorine Pesticides by Liquid/Liquid Extraction and Googanochlorine Pesticides and PCBs by Liquid/Liquid Extrac	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 D lyte Code 7355 7360 7365 7025	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	yte Code 4375 4765 5000 4420 5140 5260 D yte Code 8295 D yte Code 7355 7360 7365 7025 7110	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachlo	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	yte Code 4375 4765 5000 4420 5140 5260 D yte Code 8295 D yte Code 7365 7360 7365 7025 7110 7240	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Triffuralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachicalpha-Chiordane	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 lyte Code 7355 7360 7365 7025 7110 7240 7115	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTB tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Triffuralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachlo	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 lyte Code 7355 7365 7365 7025 7110 7240 7115 7250	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTF tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Triffuralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachloralpha-Chlordane beta-BHC (beta-Hexachlorochlordane (tech.)	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 D lyte Code 7355 7365 7025 7110 7240 7115 7250 7105	Analyte Benzene Ethylbenzene Methyl tert-butyl ethen (MTH tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachlo	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 lyte Code 7355 7365 7365 7025 7110 7240 7115 7250	Analyte Benzene Ethylbenzene Methyl tert-butyl ether (MTF tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Triffuralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachloralpha-Chlordane beta-BHC (beta-Hexachlorochlordane (tech.)	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD
Anal M 6630 B 20th El Anal M 6630 C 20th El	lyte Code 4375 4765 5000 4420 5140 5260 lyte Code 8295 D lyte Code 7355 7365 7025 7110 7240 7115 7250 7105	Analyte Benzene Ethylbenzene Methyl tert-butyl ethen (MTH tert-Butyl alcohol Toluene Xylene (total) 20153008 Analyte Trifluralin (Treflan) 20153804 Analyte 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin alpha-BHC (alpha-Hexachlo	Organochlorine Pesticides by Liquid/Liquid Extraction and Good Organochlorine Pesticides and PCBs by Liquid/Liquid Extrac GC/ECD	C/ECD

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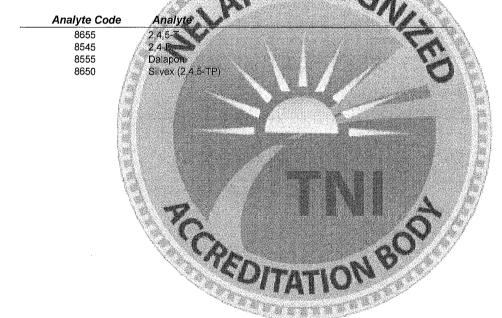
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Customers. Please verify the current accreditation standing with ORELAP.

Analyte Code	Analyte
7520	Endosulfan sulfate
7540	Endrin
7530	Endrin aldehyde
7535	Endrin ketone
7575	Etridiazole
7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
7245	gamma-Chlordane
7685	Heptachlor
7690	Heptachlor epoxide
7810	Methoxychlor
8250	Toxaphene (Chlorinated camphene)

SM 6640 B 19th ED

xy Herbicides by Liquid-Liquid and GC/ECD



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eference			Code	Description
EPA 1010	Andrews Additional Section 1997		10116606	Pensky-Martens Closed-Cup Method for Determining Ignitability
	Analyte Code	Analyte		
	1780	Ignitability		·.
EPA 1010A			10234807	Pensky-Martens Closed-Cup Method for Determining Ignitability
	Analyte Code	Analyte		
	1780	Ignitability		
EPA 1030			10117201	Ignitability of Solids
	Analyte Code	Analyte	,	
	1780	Ignitability		
EPA 1110			10118000	Corrosivity Toward Steel
	Analyte Code	Analyte		
,	1615	Corrosivity		
EPA 1110A			10235208	Corrosivity Toward Steel
	Analyte Code	Analyte		
	1615	Corrosivity		
EPA 1311			10118806	Toxicity Characteristic Leaching Procedure
	Analyte Code	Analyte		
.,	8031	Extraction/P	reparation	
EPA 1312			10119003	Synthetic Precipitation Leaching Procedure
	Analyte Code	Analyte	147770	PAPELLIN
	8031	Extraction/P	reparation	
EPA 3051			10135805	Microwave Assisted Acid Digestion of Sediments, Sludges, Soils, and Oils
	Analyte Code	Analyte		Olis
	8031	Extraction/P	reparation	
EPA 3051A			10136002	Microwave Assisted Acid Digestion of Sediments, Sludges, Soils, and Oils
	Analyte Code	Analyte	:	
	8031	Extraction/P	reparation .	•
EPA 3052			10136206	Microwave Assisted Acid Digestion of Siliceous and Organically Based Matrices
	Analyte Code	Analyte		
	8031	Extraction/P	reparation	
EPA 3060A			10136604	Alkaline Digestion for Hexavalent Chromium
	Analyte Code	Analyte		
	8031	Extraction/P	reparation	

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EPA 3540C		10140202	Soxhlet Extraction
	Analyte Code	Analyte	
-	8031	Extraction/Preparation	
EPA 3546		10141205	Microwave Extraction
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3550B		10141807	Ultrasonic Extraction
	Acceptants Occupa		OFCA_
	Analyte Code 8031	Analyte	
	8031	Extraction/Preparation	
EPA 3550C		10142004	Ultrasonic Extraction
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3580A	Į.	10143007	Waste Dilution
	Analyte Code	Analyte	
-	8031	Extraction/Preparation	and the second s
EDA 2505			West Piles & New York
EPA 3585		10143201	Waste Dilution for Volatile Organics
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3610B		10144602	Alumina Cleanup
L. 7. 00,0B		, and the same	
	Analyte Code	Analyte 🗸 🔪	
	8031	Extraction/Preparation	
EPA 3611B		10145207	Alumina Column Cleanup and separation of petroleum wastes
	Amalusta Carla	Accelose	MIN
	Analyte Code 8031	Analyte Extraction/Preparation	
	0031		
EPA 3620C		10146006	Florisil Cleanup
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3630C		10146802	Silica gel cleanup
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3660B		10148400	Sulfur cleanup
	Analyte Code	Analyte	
	8031	Extraction/Preparation	
EPA 3665A		10148808	Sulfuric Acid / permanganate Cleanup
			· · · · · · · · · · · · · · · · · · ·
	Analyte Code	Analyte	
	8031	Extraction/Preparation	

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date:

EPA 5035A

EPA 6010B

01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

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10284807

Closed-System Purge-and-Trap and Extraction for Volatile Organics in

Soil and Waste Samples

Analyte Code Analyte Extraction/Preparation 8031

10155609

ICP - AES

Analyte Code	Analyte	
1000	Aluminum	and the second s
1005	Antimony	
1010	Arsenic	
1015	Barium	- n [/ / / / / / / / / / / / / / / / / /
1020	Beryllium	LO NEVIA:
1025	Boron	
1030	Cadmium, 🦠	
1035	Calcium	
1040	Chronium	
1050	Cobalt	
1055	Copper	
1070	Iron	
1075	Lead	
1080	Lithium	
1085	Magnesium	
1090	Manganese	
1100	Molybdenum	
1105	Nickel	
1125	Potassium	
1140	Selenium	
1150	Silver	
1155	Sodium	
1160	Strontium	
1165	Thallium	
1175	Ţin 🛴 🦠	
1180	Titanium 👢	
1185	Vanadium :	THE CONTROL OF THE CO
1190	Zinc	

EPA 6010C

10155803

Analyte Code Analyte Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium

1035 Calcium 1040 Chromium 1050 Cobalt 1055 Copper 1070 Iron

1000

1005

1010

1015

1020 1025

1030

1075 Lead 1080 Lithium Magnesium 1085 1090 Manganese 1100 Molybdenum Nickel 1105

1125 Potassium Selenium 1140 1150 Silver

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

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1095

Mercury

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	Analyte Code	Analyte	
	1155	Sodium	
	1160	Strontium	
	1165	Thallium	
	1175	Tin	
	1180	Titanium	
	1185	Vanadium	
	1190	Zinc	
PA 6020			10156000 Inductively Coupled Plasma-Mass Spectrometry
	Analyte Code	Analyte	
	1005	Antimony	OKELIIA -
	1010	Arsenic	
	1015	Barium 🔸	
	1030	Cadmium 🧸	
	1040	Chromium	
	1055	Copper	
	1075	Lead	
	1090	Manganese	
	1100	Molybdenum	
	1105	Nickel	
	1140	Selenium	
	1150	Silver	
	1165	Thallium	
	1175	Tin	
	1185	Vanadium	
	1190	Zinc	
PA 6020A			10156408 Inductively Coupled Plasma-Mass Spectrometry
	Analyta Coda	Analyte	
	Analyte Code		
	1005	Antimony	
	1010	Arsenic	PEDITATION BU
	1015	Barium	
	1030	Cadmium	All/Propert/ANN
	1040	Chromium	
	1055	Copper	
	1075	Lead	
	1090	Manganese	
			1
	1100	Molybdenum	
	1105	Nickel	
	1105 1140	Nickel Selenium	
	1105 1140 1150	Nickel Selenium Silver	
	1105 1140 1150 1165	Nickel Selenium Silver Thallium	
	1105 1140 1150 1165 1175	Nickel Selenium Silver Thallium Tin	
	1105 1140 1150 1165 1175 1185	Nickel Selenium Silver Thallium Tin Vanadium	
	1105 1140 1150 1165 1175	Nickel Selenium Silver Thallium Tin	
PA 7196A	1105 1140 1150 1165 1175 1185	Nickel Selenium Silver Thallium Tin Vanadium	10162400 Chromium Hexavalent colorimetric
² A 7196A	1105 1140 1150 1165 1175 1185 1190	Nickel Selenium Silver Thallium Tin Vanadium Zinc	
PA 7196A	1105 1140 1150 1165 1175 1185 1190	Nickel Selenium Silver Thallium Tin Vanadium Zinc	
PA 7196A 	1105 1140 1150 1165 1175 1185 1190	Nickel Selenium Silver Thallium Tin Vanadium Zinc	

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EPA 7471B 10166402 Mercury by Cold Vapor Atomic Absorption Analyte Code Analyte 1095 Mercury **EPA 8015B** 10173601 Non-halogenated organics using GC/FID Analyte Code Analyte Diesel range organics (DRO) 9369 4750 Ethanol Gasoline range organics (GRO) 9408 4930 Methanol ganics Using GC/FID **EPA 8015D** Analyte Code Analyte 9369 organics (DRO) 4750 9408 Gasoline range organics (GRO) 4930 Methanol Aromatic and Halogenated Volatiles by GC with PID and/or ECD Purge EPA 8021B 10174808 & Trap Analyte Code Analyte 4375 Benzene 4765 Ethylbenzene 5000 Methyl tert-butyl ether (MTBE) 5245 m-Xylene

EPA 8081A

5250

5255 5140

5260

o-Xylene p-Xylene

Toluene

Xylene (tota

Organochlorine Pesticides by GC/ECD

Analyte Code	Analyte
7355	4,4'-DDD
7360	4,4'-DDE
7365	4,4'-DDT
7005	Alachlor
7025	Aldrin
7110	alpha-BHC (alpha-Hexachlorocyclohexane)
7240	alpha-Chlordane
7115	beta-BHC (beta-Hexachlorocyclohexane)
7250	Chlordane (tech.)
7265	Chloroneb
7310	Chlorthalonil (Daconil)
7105	delta-BHC
7470	Dieldrin
7510	Endosulfan I
7515	Endosulfan II
7520	Endosulfan sulfate
7540	Endrin
7530	Endrin aldehyde
7535	Endrin ketone
7575	Etridiazole
7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
7245	gamma-Chlordane
7685	Heptachlor
7690	Heptachlor epoxide
6275	Hexachlorobenzene

ORELAP ID: TN200002

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Analyte Code	Analyte	
6285	Hexachlorocyclopentadiene	
7810	Methoxychlor	
7975	Permethrin (total)	
8045	Propachlor (Ramrod)	
8250	Toxaphene (Chlorinated camphene)	
8295	Trifluralin (Treflan)	

EPA 8081B

10178800

Organochlorine Pesticides by GC/ECD

Analyte Code	Analyte
7355	4,4'-DDD
7360	4,4'-DDE
7365	4,4'-DDT
7005	Alachlor
7025	Aldrin
7110	alpha-BHC (alpha-Hexachlorocyclohexane)
7240	alpha Chiordane
7115	beta-BHC (beta-Hexachlorocyclohexane)
7250	Chlordane (tech.)
7265	Chloroneb
7310	Chlorthalonil (Daconil)
7105	delta-BHC
7470	Dieldrin
7510	Endosulfan I
7515	Endosulfan II
7520	Endosulfan sulfate
7540	Endrin
7530	Endrin aldehyde
7535	Endrin ketone
7575	Etriclazole
7120	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)
7245	gamma Chilordane
7685	Heptachlor
7690	Heptachlor epoxide
6275	Hexachlorobenzene
6285	Hexachlorocyclopentadiene
7810	Methoxychlor
7975	Permethrin (total)
8045	Propachlor (Ramrod)
8250	Toxaphene (Chlorinated camphene)
8295	Trifluralin (Treflan)

EPA 8082		10179007	Polychlorinated Biphenyls (PCBs) by GC/ECD
	Analyte Code	Analyte	
	8880	Aroclor-1016 (PCB-1016)	
	8885	Aroclor-1221 (PCB-1221)	
	8890	Aroclor-1232 (PCB-1232)	
	8895	Aroclor-1242 (PCB-1242)	
	8900	Aroclor-1248 (PCB-1248)	
	8905	Aroclor-1254 (PCB-1254)	
	8910	Aroclor-1260 (PCB-1260)	

EPA 8082A

10179201

Polychlorinated Biphenyls (PCBs) by GC/ECD

Analyte Code	Analyte	
8880	Aroclor-1016 (PCB-1016)	
8885	Aroclor-1221 (PCB-1221)	
8890	Aroclor-1232 (PCB-1232)	
8895	Aroclor-1242 (PCB-1242)	

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte	
 8900	Aroclor-1248 (PCB-1248)	
8905	Aroclor-1254 (PCB-1254)	
8910	Aroclor-1260 (PCB-1260)	

EPA 8141A

10182000

Organophosphorous Pesticides by GC/NPD

Analyte Code	Analyte
7075	Azinphos-methyl (Guthion)
7125	Bolstar (Sulprofos)
7300	Chlorpyrifos
7315	Coumaphos
7395	Demeton-o
7385	Demeton-s
7410	Diazinon
8610	Dichlorovos (DDVP, Dichlorvos)
7475	Dimethoate.
8625	Disulfoton
7550	EPN Company of the Co
7570	Ethoprop
7600	Fensulfothlon
7605	Fenthion
7770	Malathion
7785	Merphos
7825	Methyl parathion (Parathlon, methyl)
7850	Mevinphos
7905	Naled
7985	Phorate
8110	Ronnel
8155	Sulfotepp
8200	Tetrachlorvinphos (Stirophos, Gardona) Z-Isomer
8210	Tetraethyl pyrophosphate (TEPP)
8245	Tokuthion (Prothiophos)
8275	Trichloronate

EPA 8141B

0182204 Organophosphorous Pesticides by GC/NPD

Analyte Code Analyte	
7075 Azinphos-methyl (Guthion)	
7125 Bolstar (Sulprofos)	
7300 Chlorpyrifos	
7315 Coumaphos	
7395 Demeton-o	
7385 Demeton-s	
7410 Diazinon	
8610 Dichlorovos (DDVP, Dichlorvos)	
7475 Dimethoate	
8625 Disulfoton	
7550 EPN	
7570 Ethoprop	
7600 Fensulfothion	
7605 Fenthion	
7770 Malathion	
7785 Merphos	
7825 Methyl parathion (Parathion, methyl)	
7850 Mevinphos	
7905 Naled	
7985 Phorate	
8110 Ronnel	
8155 Sulfotepp	
8200 Tetrachlorvinphos (Stirophos, Gardona) Z-isomer	
8210 Tetraethyl pyrophosphate (TEPP)	

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EPA CODE: TN00003

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	Analyte Code	Analyte	
	8245	Tokuthion (Prothiophos)	
	8275	Trichloronate	
EPA 8151A		10183207	Chlorinated Herbicides by GC/ECD
	Analyte Code	Analyte	
	8655	2,4,5-T	
	8545	2,4-D	
	8560	2,4-DB	
	8555	Dalapon	
	8595	Dicamba 💣	
	8605	Dichloroprop (Dichloroprop)	
	8620	Dinoseb (2-sec-butyl-4-6-dinit	ophenol, DNBP)
	7775	MCPA	
	7780	MCPP	
	8650	Silvex (2.4.5 TP)	
EPA 8260B	3	10184802	Volatile Organic Compounds by purge and trap GC/MS

8620	Dilloses (5-sec-makt-4so-quarrobustion, Plater A	
7775	MGPA	
7780	MIGEP	
8650	Silvex (2,4,6,TP)	
PA 8260B	10184802 Volatile Organic Compounds by purge and trap GC/MS	
(
Analyte Code	Analyte	
5105	1.1.1.2-Tetrachloroethane	
5160	1,1,1-Trichloroethane	
5110	1,1,2,2-Tetrachloroethane	
5195	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	
5165	1,1,2-Trichloroethane	
4630	1,1-Dichloroethane	
4640	1,1-Dichloroethylene	
4670	1,1-Dichloropropene	
5150	1,2,3-Trichlorobenzene	
5180	1,2,3. Prichloropropane	
5155	1,2,4 Problemzene	
5210		
4570	1,2-Dibromo-3-chloropropane (DBCP)	
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)	
4610	1,2,4-T(methylbenzene 1,2-Dibromo-3-daloropropane (DBCP) 1,2-Dibromoethane (EDB, Ethylene dibromide) 1,2-Dichloropenzene 1,2-Dichloroethane (Ethylene dichloride)	
4635	1,2-Dichloroethane (Hinylene dichloride)	
4655	1,2-Dichloropropane	
5215	1,3,5-Trimethylbenzene	
4615	1,3-Dichlorobenzene	
4660	1,3-Dichloropropane	
4620	1,4-Dichlorobenzene	
4735	1,4-Dioxane (1,4- Diethyleneoxide)	
6380	1-Methylnaphthalene	
5220	2,2,4-Trimethylpentane	
4665	2,2-Dichloropropane	
4410	2-Butanone (Methyl ethyl ketone, MEK)	
4500	2-Chloroethyl vinyl ether	
4535	2-Chlorotoluene	
4860	2-Hexanone	
6385	2-Methylnaphthalene	
5020	2-Nitropropane	
6103	3,3'-dimethyl-1-butanol	
4540	4-Chlorotoluene	
4910	4-Isopropyltoluene (p-Cymene)	
4995	4-Methyl-2-pentanone (MIBK)	
4315	Acetone	
4320	Acetonitrile	
4325	Acrolein (Propenal)	
4340	Acrylonitrile	
4355	Allyl chloride (3-Chloropropene)	
4375	Benzene	

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Cod	
4385	Bromobenzene
4390	Bromochloromethane
4395	Bromodichloromethane
4397	Bromoethane (Ethyl Bromide)
4400	Bromoform
4450	Carbon disulfide
4455	Carbon tetrachloride
4475	Chlorobenzene
4575	Chlorodibromomethane
4485	Chloroethane (Ethyl chloride)
4505	Chloroform
4525	
4645	Chloroprene (2-Chloroff 3-thesic ene) cis-1, 2-Dichloropropress cis-1, 3-Dichloropropress ais 1, 4-Dichloroff-butene
4680	cis-1;3-Dichloropispena
4600	os 4.4 Dichoro 2 butene
4555	Cyclobexage
4560	Cyclotaxerione
4580	Dibroniachiorograpare A A
4595	Dibromomerhane «Methylene brom de)
4625	Dichlorodifluoromethené (ikreon 212)
4725	Diethyliether and a state of the control of the con
9375	Di-isopropy ether (DIPE)
4750	Etranol
4755	Etnyl aperate
4810	Ehyl metheciylete
4765	Chrypenzene
4770	Ethy it bury ether (ETBE) (2-Ethoxy-2-methyloropane)
4835	Hexechlorabulegiene
4840	Hexachloroethane Later and the second second
4870	loggmetgane (Metry) iodide)
4875	Isobulty alcohol (2-Methy-1)-prepared
4895	Isopropyl a sphol (2-Propanol Isopropanol)
4900	Isoprodyloenze ye
4925	Méthacylonius
4940	
	Methyl acetate
4945	Methyl acrylate
4950	Methyl bromide (Bromomethanes)
4960	Methyl chloride (Chloromethane)
4990	Methyl methacrylate
5000	Methyl tert-butyl ether (MTBE)
4965	Methylcyclohexane
4975	Methylene chloride (Dichloromethane)
5245	m-Xylene
5005	Naphthalene
4425	n-Butyl alcohol (1-Butanol, n-Butanol)
4435	n-Butylbenzene
4855	n-Hexane
5025	n-Nitroso-di-n-butylamine
5090	n-Propylbenzene _
5250	o-Xylene
5035	Pentachloroethane
5080	Propionitrile (Ethyl cyanide)
5255	p-Xylene
4440	sec-Butylbenzene
5100	Styrene
4370	T-amylmethylether (TAME)
4368	tert-amyl alcohol
4420	tert-Butyl alcohol
4445	tert-Butylbenzene
9557	tert-butyl-formate
5115	Tetrachloroethylene (Perchloroethylene)

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Analyte Code	Analyte
5120	Tetrahydrofuran (THF)
5140	Toluene
4700	trans-1,2-Dichloroethylene
4685	trans-1,3-Dichloropropylene
4605	trans-1,4-Dichloro-2-butene
5170	Trichloroethene (Trichloroethylene)
5175	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)
5225	Vinyl acetate
5235	Vinyl chloride
5260	Xylene (total)

EPA

A 8260C		10307003 Volatile Organics: GC/MS (capillary column)
	Analyte Code	Analyte . 1,1,1,2-Tetrachloroethane
-	5105	1,1,1,2-Tetrachloroethane
	5160	1,1,1-Trichloroethane
	5110	1,1,2.2 Tetrachloroethane
	5195	1,1,2-Frichloro-1,2,2-trifluoroethane (Freon 113)
	5165	1,1,2-Trichloroethane
	4630	1,1-Dichloroethane
	4640	1,1-Dichloroethylene
	4670	1,1-Dichloropropene
	5150	1,2,3-Trichlorobenzene
	5180	1,2,3-Trichloropropane
	5155	1,2,4-Trichlorobenzene
	5210	1,2,4-Trimethylbenzene
	4570	1,2-Dibromo-3-chloropropane (DBCP)
	4585	1,2-Dibromoethane (EDB, Ethylene dibromide)
	4610	1,2-Dichlorobenzene
	4635	1,2-Dichloroethane (Ethylene dichloride)
	4655	1,2-Dienloropropane
	5215	
	4615	1,3-Dichlorobenzene
	4660	1,3-Dichloropropane
	4620	1,3,5-Trimethylbenzene 1,3-Dichloropropane 1,3-Dichloropropane 1,4-Dichlorobenzene 1,4-Dioxane (1,4- Dicthyleneoxide)
	4735	1,4-Dioxane (1,4- Diethyleneoxide)
	6380	1-Methylnaphthalene
	5220	2,2,4-Trimethylpentane
	4665	2,2-Dichloropropane
	4410	2-Butanone (Methyl ethyl ketone, MEK)
	4500	2-Chloroethyl vinyl ether
	4535	2-Chlorotoluene
	4860	2-Hexanone
	5145	2-Methylaniline (o-Toluidine)
	6385	2-Methylnaphthalene
	5020	2-Nitropropane
	4540	4-Chlorotoluene
	4910	4-Isopropyltoluene (p-Cymene)
	4995	4-Methyl-2-pentanone (MIBK)
	4315	Acetone
	4320	Acetonitrile
	4325	Acrolein (Propenal)
	4340	Acrylonitrile
	4355	Allyl chloride (3-Chloropropene)
	4375	Benzene
	4385	Bromobenzene
	4390	Bromochloromethane
	4395	Bromodichloromethane
	4397	Bromoethane (Ethyl Bromide)
	4400	Bromoform
	4450	Carbon disulfide

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Analyte Coo	
4455	Carbon tetrachloride
4475	Chlorobenzene
4575	Chlorodibromomethane
4485	Chloroethane (Ethyl chloride)
4505	Chloroform
4525	Chloroprene (2-Chloro-1,3-butadiene)
4645	cis-1,2-Dichloroethylene
4680	cis-1,3-Dichloropropene
4600	cis-1,4-Dichloro-2-butene
4555	Cyclohexane
4560	Cyclohexanone was project and the control of the co
4580	- ACCESS HOUSE HAS BUTCHES BUTCHES AND A TOTAL
4595	Dibromochloropropase Dibromomethane (Metry lene bromide) Dichilorodifluoromethane (Freon-12) Diethyl athier
4625	Dichlerodifluoramethane (Freon-12)
4725	Diethyl effer se
9375	Diviscond wher (GIPE)
4750	
	Etrapola
4755	Ethyl Relate
4810	Ethyl methacrylate
4765	Ethylbenzene
4770	Ethylif butyletner (ETBE) (2-Ethoxy-2-methylpropane)
4835	Hexachlorobulaciena - 2
4840	Hexachic/gethene
4870	Todomethane (Methyl fod de)
4875	Isobuty) a conditional propanal
4895	Isopropyl alcond (2/Propano, Isopropanol)
4900	Isoprocylaenzene
4925	C. Metheciyion brie
4940	Methyl acetate
4945	Methic acrylate
4950	Methyloromole (Bromomethane)
4960	Mathy Cilorde (Chloromethane)
4990	Mathyl methactiyate
5000	Methy ter Pour letter (MTSE)
4965	Methylcyclonexare
4975	Methylene chloridaty sichloromic (haula)
5245	m-Xylene
5005	Naphthalene
4425	n-Butyl alcohol (1-Butanol, n-Buttanol)
4435	n-Butylbenzene
5015	Nitrobenzene
5025	n-Nitroso-di-n-butylamine
5090	n-Propylbenzene
5250	o-Xylene
5035	Pentachloroethane
5080	Propionitrile (Ethyl cyanide)
5255	p-Xylene
6685	Safrole
4440	sec-Butylbenzene
5100	Styrene
4370	T-amylmethylether (TAME)
4420	tert-Butyl alcohol
4445	tert-Butylbenzene
5115	Tetrachloroethylene (Perchloroethylene)
5120	Tetrahydrofuran (THF)
5140	Toluene
4700	trans-1,2-Dichloroethylene
4685	trans-1,3-Dichloropropylene
	trans-1,3-Dichloropropylene trans-1,4-Dichloro-2-butene
4605 5170	·
5170	Trichloroethene (Trichloroethylene)

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	Analyte Code	Analyte	
-	5225	Vinyl acetate	
	5235	Vinyl chloride	
	5260	Xylene (total)	

EPA 8270C

8270C			10185805	Semivolatile Organic compounds by GC/MS
	Analyte Code	Analyte		
-	6703	1,1'-Biphenyl	(BZ-0)	
	6705	/ 4 4	chlorobenzene	wy Maria dianacha piasa and a sana
	6710		chlorobenzene	Landau (Landau Landau Landa
	6715	- P - W - J	ciilorobenzene.	
	5155	1,2,4-Tright	THE RESERVE THE PARTY OF THE PA	
	4610	1,2-Dichlorot	The state of the s	ECOGN
	6221	1,2-Dipheny		
	6885		hedzene (1.3.5/TNB)	
	4615	Aracido, Picqui	enzene	
	6160	1,3-likeliketa	nzene (1.3.0NB):	ing sangan ay fangasan waxan badalah. Alimpi kasan ba
	4620	1,4 Did barot		
	6420	1,4-Naphthod	puincaie 🔻 🗀 🤼 i.	
	5790	- f-Chleronae	nthalane 🖈 📆 📉	
	6380	1-Methy napt	nnalene	
	6425	1-Napathylar	nina in territoria.	
	6735	(4) 2 , 3 (4) 6-1 et (4)	chiorophianbar	
	6835	2,4 5.Trichle	opnenol	
	6840	MACONING I	ophero:	
	6000			
	6130	2,4 Dmetrii		
	6175	- 24 Dinitroon		
	6185		Lane (2.4-DNT)	
	6005			
	6190		rana (26a.Dh.)) e e e	
	5515	Catalogi Meni S		
	5795	240 hilmoher:	inacina	
	5800	2- 0[h][p] 6 (d) =		
	6360			efficers integral of the property of the prope
	5145	2-Methylaniii	CONTRACTOR OF THE PROPERTY OF	
	6385	2-Methylnaph		CONTRACTOR OF THE PART OF THE
	6400	2-Methylpher		and the state of t
	6430	2-Naphthylan		Kanaganakan da sa
	6460 6490	2-Nitroaniline 2-Nitropheno		
	5050	•	ı Methylpyridine)	
	5945	3,3'-Dichlorol		
	6120	3,3'-Dimethyl		
	6355	3-Methylchola		
	6465	3-Nitroaniline		
	5540	4-Aminobiphe		
	5660		nyl phenyl ether	
	5700	4-Chloro-3-m		
	5745	4-Chloroanilir	• • •	
	5825	4-Chloropher	nyl phenylether	
	6105	•	minoazobenzene	
	6410	4-Methylpher	nol (p-Cresol)	
	6470	4-Nitroaniline		
	6500	4-Nitropheno		
	6510	4-Nitroquinoli		
	6570	5-Nitro-o-tolu	idine	
	6115		lbenz(a) anthracene	
	9417		;, g) carbazole	
	6125		phenethylamine	
	5500	Acenaphthen	е	

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date: 01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

this list supercedes all previous lists for this certificate number.

Analyte Code	e Analyte	
5505	Acenaphthylene	
5510	Acetophenone	
5545	Aniline	
5555	Anthracene	
5560	Aramite	
7065	Atrazine	
5565	Benzal chloride	
5570	Benzaldehyde	
5595	Benzidine	
5575	Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,l)perylene Benzo(j)fluoranthrace Benzo(k)fluoranthrace Benzo(k)fluoranthrace Benzo(b)fluoranthrace	
5580	Benzo(a)pyrerie	
5590	Benzo(g.h.i)perylene	
9309	Benzo(j)fluorantige ue	
5600	Benzo(k)fluoranthane	
5585		
5610	Benzac adal	4
5625	Benzelaub onde	ħ.
5630	BenzyNelcond N. A.	MA.
5635	Benzyl Chlonde	kini.
5760	bis(2-Chroroethoxy)methane	Nig
5765	bls. 2-Charoethylhether	
5780	bis(2-Ch preisopropyl) ether	
5670	Butyl genzyl phthalate	
7180	Caprolacian	
5680	Carbazore	æ i
7260	Chiprobenzilate	
5855	Chrysene	
6065	Di(2-othy hoxy) i prihalate i ibis 2-Etry héxyl phris até DEHP)	
7405 9354	Dialiate	
	Dibenzie, fil abridine	
5900 5895	Dibenzia il atridine	
9348	Dibenzuelli enthracene	
9351	Dibenzoram) Syrene Dibenzoram syrene	
5890	-Dibenzo(a,e) pwent	
5905	Dibenzofuran 24. 7. 27. 7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
6070	Diethyl phthalate	
7475	Dimethoate	
6135	Dimethyl phthalate	
5925	Di-n-butyl phthalate	
6200	Di-n-octyl phthalate	
8620	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	
6205	Diphenylamine	
8625	Disulfoton	
6260	Ethyl methanesulfonate	
7580	Famphur	
6265	Fluoranthene	
6270	Fluorene	
6275	Hexachlorobenzene	
4835	Hexachlorobutadiene	
6285	Hexachlorocyclopentadiene	
4840	Hexachloroethane	
6290	Hexachlorophene	
6295	Hexachloropropene	
6315	Indeno(1,2,3-cd) pyrene	
7725	Isodrin	
6320	Isophorone	
6325	Isosafrole	
7740	Kepone	
6345	Methapyrilene	
6375	Methyl methanesulfonate	

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte
7825	Methyl parathion (Parathion, methyl)
5005	Naphthalene
5875	n-Decane
5015	Nitrobenzene
6525	n-Nitrosodiethylamine
6530	n-Nitrosodimethylamine
5025	n-Nitroso-di-n-butylamine
6545	n-Nitrosodi-n-propylamine
6535	n-Nitrosodiphenylamine
6550	n-Nitrosomethylethalamine
6555	n-Nitrosomorpholine n-Nitrosopiperidine n-Nitrosopyrrolidine n-Octadecane o.o.o-Trietny baosphorothioate
6560	n-Nitrosopiperidine
6565	n-Nitrosopyrrolidine
6580	n-Octadecane
8290	o,o,o-Triethyhphiosphorothioate
7955	Parathion, ethyl
6590	Pentach grobenzene
5035	Pentachloroethane
6600	Pentachloronitrobenzene
6605	Pentachlorophenol
6610	Phenacetin
6615	Phenanthrene
6625	Phenol
7985	Phorate
9663	p-Phenylenediamine
6650	Pronamide (Kerb)
6665	Pyrene
5095	Pyridine
6685	Safrole
8155	Sulfotepp
8235	Thionazin (Zinophos)

EPA 8270C SIM

10242407

Semivolatile Organic compounds by GC/MS Selective Ion Monitoring

Analyte
1-Methylnaphthalene
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Benzo[b]fluoranthene
Chrysene
Dibenz(a,h) anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd) pyrene
Naphthalene
Phenanthrene
Pyrene

EPA 8270D

10186002

Semivolatile Organic compounds by GC/MS

Ana	lyte Code	Analyte	
	6703	1,1'-Biphenyl (BZ-0)	
	6705	1,2,3,4-Tetrachlorobenzene	
	6710	1,2,3,5-Tetrachlorobenzene	
	6715	1,2,4,5-Tetrachlorobenzene	

ORELAP ID: TN200002

EPA CODE: TN00003

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Expiration Date: 01/15/2013

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Analyte Code	Analyte
5155	1,2,4-Trichlorobenzene
4610	1,2-Dichlorobenzene
6221	1,2-Diphenylhydrazine
6885	1,3,5-Trinitrobenzene (1,3,5-TNB)
4615	1,3-Dichlorobenzene
6160	1,3-Dinitrobenzene (1,3-DNB)
4620	1,4-Dichlorobenzene
6420	1,4-Naphthoquinone
5790	1-Chloronaphthalene
6380	* Construction of the cons
6425	1-Methylnaphthalene 1-Naphthylamine 2,3,4,6-Tetrachlorophenal 2,4,5-Trichlorophenal 2,4,6-Trichlorophenal 2,4,6-Trichlorophenal 2,4-Biophenal
6735	2.3.4.6-Tetrasniorophemol
6835	2,4,5-Triefforopherio
6840	2,4,6-Enghisrophisnor
6000	2.4-Dichigrapheno
6130	2,4 Dime (vitherol
6175	Z.4-Bin appliend
6185	2,4-Dihaoto Jene (2.4-DNT)
6005	2,6-Dichlorophenois
6190	2,6-Din trate uene (2,6-DNT).
5515	2-Acetylaminofluorene y salam ambar alla anche anche a
5795	2-Chloronatichalene
5800	2-Chlorophers
6360	2-Metry 4.6 cin tropheno (4.6-Din tro-2-methylphenol)
5145	24Methy anithe (paticipidine)
6385	2-Metrylraphthalens
6400	2-Methylpmeno (o Cresol)
6430	2-Nachtrylamine
6460	2-Nitroariline ii
6490	2 Nindogeno Sit is Nin XI .
5050	2-Pictorne_12-Methylpyndine)
5945	3,3 Dignorgenz dine
6120	3,3 Dimetryibenzia ne
6355	3-Methylerib amtolene
6465	
5540	3-Nitroamine
	4-Aminobiothery
5660	4-Bromophenyl ether # # # # # # #
5700	4-Chloro-3-methylphenol
5745	4-Chloroaniline
5825	4-Chlorophenyl phenylether
6105	4-Dimethyl aminoazobenzene
6410	4-Methylphenol (p-Cresol)
6470	4-Nitroaniline
6500	4-Nitrophenol
6510	4-Nitroquinoline 1-oxide
6570	5-Nitro-o-toluidine
6115	7,12-Dimethylbenz(a) anthracene
9417	7h-Dibenzo(c, g) carbazole
6125	a-a-Dimethylphenethylamine
5500	Acenaphthene
5505	Acenaphthylene
5510	Acetophenone
5545	Aniline
5555 5560	Anthracene
5560	Aramite
7065	Atrazine
5565	Benzal chloride
5570	Benzaldehyde
5595	Benzidine
5575	Benzo(a)anthracene
5580	Benzo(a)pyrene

ORELAP ID: TN200002

EPA CODE: TN00003

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Analyte Code	Analyte
5590	Benzo(g,h,i)perylene
9309	Benzo(j)fluoranthene
5600	Benzo(k)fluoranthene
5585	Benzo[b]fluoranthene
5610	Benzoic acid
5625	Benzotrichloride
5630	Benzyl alcohol
5635	Benzyl chloride
5760	bis(2-Chloroethoxy)methane
5765	
5780	bis(2-Chloroethyl) ether bis(2-Chloroisopropyl) ether Butyl benzyl prithalako Caprolactam Carbazole Chlorobenz lato
5670	Butyl benzyl phthalater
7180	Caprolagiam
5680	Carbazole & William
7260	Chlorobertz late
5855	Chrysene
6065	Di(2-phythexyl) obthalate: (b.s(2-Ethylnexyl)ohthalate, DEHP)
7405	Dialiane
9354	Dibenz(a, n) acridine
5900	Dipenzia, placifica de la companya del companya de la companya del companya de la
5895	Diptrizia, n) anthracene
9348	Dibenzola In pyrene
9351	Dibenzora il pyrene
5890	Dibanzota ej pyrene
5905	Dibenzofuran
6070	Diethy) phthalate
7475	Dimetricate:
6135	Dimethy/ portralate
5925	Den-butyl pritralate
6200	Directly of the are
8620	Dinoseb (2-sec-butyl-4-6-cin troch and), DINBP)
6205	Dipheryamine
8625	Distribion ()
6260	Ethyl methanosubsacte
7580	Fampour CASA .
6265	Fluorantherie Publish A.
6270	Fluorene
6275	Hexachlorobenzene um
4835	Hexachlorobutadiene
6285	Hexachlorocyclopentadiene
4840	Hexachloroethane
6290	Hexachlorophene
6295	Hexachloropropene
6315	Indeno(1,2,3-cd) pyrene
7725	Isodrin
6320	Isophorone
6325	Isosatrole
7740	Kepone
6345	Methapyrilene
6375	Methyl methanesulfonate
7825	Methyl parathion (Parathion, methyl)
5005	Naphthalene
5875	n-Decane
5015	Nitrobenzene
6525	n-Nitrosodiethylamine
6530	n-Nitrosodimethylamine
5025	n-Nitroso-di-n-butylamine
6545	n-Nitrosodi-n-propylamine
6535	n-Nitrosodiphenylamine
6550	n-Nitrosomethylethalamine
6555	n-Nitrosomorpholine

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

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As of 01/16/2012

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•	The current deprediction etailary with exacts.
Analyte Code	Analyte
6560	n-Nitrosopiperidine
6565	n-Nitrosopyrrolidine
6580	n-Octadecane
8290	o,o,o-Triethyl phosphorothioate
7955	Parathion, ethyl
6590	Pentachlorobenzene
5035	Pentachloroethane
6600	Pentachloronitrobenzene
6605	Pentachlorophenol
6610	Phenacetin
6615	Phenanthrene Phena
6625	Phenol
7985	Phenacetin Phenanthrene Phenol Phorate p-Phenoylenediamine Pronamice (Kerib)
9663	p-Phenylenediamine
6650	Pronamide (Kerli)
6665	Pyrens
5095	Pyridine:
6685	Safrole
8155	Sulfotepp
8235	Thionazin (Zinophos)
EPA 8270D SIM	10242509 Semivolatile Organic compounds by GC/MS Selective Ion Monitoring
Analyte Code	Analyte
6380	1-Methylnaphthalene
6385	2-Methylnephthalene
5500	Acenaphthene
5505	Acenaphthylene
5555	Anthracene
5575	Benzo(a)anthracene
5580	Benzo(a)pyrene
5590	Benzo(g,h,))perylene
5600	Benzo(K)filloranthene
5585	Benzo[b]fluoranthene
5855	Benzo(K)filloranthene Benzo[b]filloranthene Chrysene Dibenz(e, b); anthracere
5895	Dibenz(a,h) anthracetic
6265	Fluoranthene
6270	Fluorene
6315	Indeno(1,2,3-cd) pyrene
5005	Naphthalene
6615	Phenanthrene
6665	Pyrene

EPA 8310

10187607

Polynuclear Aromatic Hydrocarbons by HPLC/UV-VIS

Analyte Code	Analyte	
5500	Acenaphthene	
5505	Acenaphthylene	
5555	Anthracene	
5575	Benzo(a)anthracene	
5580	Benzo(a)pyrene	
5590	Benzo(g,h,i)perylene	
5600	Benzo(k)fluoranthene	
5585	Benzo[b]fluoranthene	
5855	Chrysene	
5895	Dibenz(a,h) anthracene	
6265	Fluoranthene	
6270	Fluorene	
6315	Indeno(1,2,3-cd) pyrene	
5005	Naphthalene	
6615	Phenanthrene	
	·	

ORELAP ID: TN200002

EPA CODE: TN00003

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	Analyte Code	Analyte	
	6665	Pyrene	
EPA 8330		10189807	Nitroaromatics and Nitramines by HPLC/UV-VIS
	Analyte Code	Analyte	
	6885	1,3,5-Trinitrobenzene (1,3,5-TNB)	
	6160	1,3-Dinitrobenzene (1,3-DNB)	
	9651	2,4,6-Trinitrotoluene (2,4,6-TNT)	
	6185	2,4-Dinitrotoluene (2,4-DNT)	
	6190	2,6-Dinitrotoluene (2,6-DNT)	
	9303 6462	2-Amino-4,6-dinitrotoluene (2-ami) 2-Nitroquanidine	dnt) dnt) = (tetryl)
	9507	2-Nitrotoluene	
	9510	3-Nitrotoluene	N///
	9306	4-Amino 2,6-dintrotoluene (4-am-c	dnt)
	9513	4-Nitrotoluene	
	6415	Methyl-2,4,6-trinitrophenylnitramine	e (tetryl)
	5015	Nitrobenzene	
	6485	Nitroglycerin	
	9522	Octahydro-1,3,5,7-tetranitro-1,3,5,	7-tetrazocine (HMX)
	9558	Pentaerythritoltetranitrate	
	9432	RDX (hexahydro-1,3,5-trinitro-1,3,5	p-triazine)
PA 8330A		10190008	Nitroarematics and Nitramines by High Performance Liquid
			Chromatography (HPLC)
	Analyte Code	Analyte	
	6885	1,3,5-Trinitrobenzene (1,3,5-TNB)	
	6160	1,3-Dinitrobenzene (1,3-DNB)	
	9651	2,4,6-Trinitrotoluene (2,4,6-TNT)	
	6185	2,4-Dinitrotoluene (2,4-DNT)	
	6190	2,6-Dimiratoluene (2,6-DNT)	
	9303	2-Amino-4,6-dinitrotoluene (2-am-c	int)
	9507 9510	2-Nitrotoluene	
	9306	3-Nitrotoluene 4-Amino-2,6-dimitrotoluene (4-am-c	int\
	9513	4-Nitrotoluene	Int) BOY
	6415	Methyl-2,4,6-trinitrophenylnitramme	- (tetrvi)
	5015	Nitrobenzene	
	6485	Nitroglycerin	
	9522	Octahydro-1,3,5,7-tetranitro-1,3,5,7	7-tetrazocine (HMX)
	9558	Pentaerythritoltetranitrate	
	9432	RDX (hexahydro-1,3,5-trinitro-1,3,5	5-triazine)
PA 9010B		10193007	Total and Amenable Cyanide by Distillation and UV-Vis
	Analyte Code	Analyte	
	1510	Amenable cyanide	
	1645	Total cyanide	
PA 9010C		10243002	Total and Amenable Cyanide by Distillation and UV-Vis
	Analysia Carla	Analysia	
	Analyte Code	Analyte	
	1510 1645	Amenable cyanide Total cyanide	
	1040	Total Gyanide	
PA 9012A		10193405	Total and Amenable Cyanide (automated colorimetric with off-line
	Analysis O-si-	Analysta	distillation)
	Analyte Code	Analyte	
	1645	Total cyanide	

ORELAP ID: TN200002

EPA CODE: TN00003

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EPA 9012B			10243206	Total and Amenable Cyanide (automated colorimetric with off-line distillation)
	Analyte Code	Analyte		
	1645	Total cyanide		
EPA 9013			10193609	Cyanide Extraction Procedure for Solids and Oils
	Analyte Code	Analyte		
	8031	Extraction/Pro	eparation	and the second s
	0001	- Extraodolist 1		
EPA 9013A			10308802	Cyanide Extraction Procedure for Solids and Oils
	Analyte Code	Analyte		
-	8031	Extraction/Pr	aparation .	
	0031	EXII ACII OII / FI		*/ ! /•
EPA 9023			10195003	Extractable Organic Halides (EOX) in Solids
	Amaluda Ozzla			
-	Analyte Code	Analyte ^a	1 11 1 - 1	ON THE RESERVE OF THE PARTY OF
	1720	Extractable o	rganics halides (E	
EPA 9030B			10195605	Acid-Soluble and Acid-Insoluble sulfides: Distillation
	Analyte Code	Analyte		
	2005	Sulfide		The state of the s
EPA 9034		4.0	10196006	Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides
	Analyte Code	Analyte		And the second s
,	2005	Sulfide	1000	
	2005	Gunue		
EPA 9045C		77.	10198400	Soil and Waste pH
	Analyte Code	Analyte 🧪	٩.	
	1900	pH 🐪	APA.	
EPA 9045D			10244607	Soil and Waste pH
			Section 1	AIV
	Analyte Code	Analyte		
	1900	рH		
EPA 9050A			10198808	Specific Conductance
	Analyta Cada	Analuta		
	Analyte Code 1610	Analyte Conductivity		
	1010	Conductivity		
EPA 9056			10199403	Determination of Inorganic Anions by Ion Chromatography
	Analyte Code	Analyte		
		Allalyte		
		Bromide		
	1540	Bromide Chloride		
	1540 1575	Chloride		
	1540 1575 1730 1810	Chloride Fluoride Nitrate as N		
	1540 1575 1730 1810 1840	Chloride Fluoride	nate as P	
	1540 1575 1730 1810	Chloride Fluoride Nitrate as N Nitrite as N	ate as P	
EPA 9056A	1540 1575 1730 1810 1840 1870	Chloride Fluoride Nitrate as N Nitrite as N Orthophosph	nate as P	Determination of Inorganic Anions by Ion Chromatography
EPA 9056A	1540 1575 1730 1810 1840 1870	Chloride Fluoride Nitrate as N Nitrite as N Orthophosph		Determination of Inorganic Anions by Ion Chromatography

ORELAP ID: TN200002

EPA CODE: TN00003

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	Analyte Code	Analyte		
	1575	Chloride		
	1730	Fluoride		
	1805	Nitrate		
	1835	Nitrite	. 5	
	1870	Orthophospl	nate as P	
	2000	Sulfate ——		
EPA 9060			10200201	Total Organic Carbon
	Analyte Code	Analyte		
	2040	Total organi	c carbon 💮	
EPA 9060A			10244801	Total Organic Carbon
	Analyte Code	Analyte		
	2040		€aceben	
	2040	Total organi		
EPA 9071B	/	**	10201602	Oil and Grease Extraction Method for sludge and sediment samples
	Analyte Code	Analyte		
	1860	Oil & Grease	1	
EPA 9095			10204009	Paint Filter Liquids Test
	Analyte Code	Analyte		
	8031	Extraction/P	reparation	
PA 9095A			10204203	Paint Filter Liquids Test
IFA BUBUA	\\\		10204203	Faints (Refrequences)
	Analyte Code	Analyte		
	8031	Extraction/R	reparation	
NWTPH-Dx	•		90018409	Oregon DEQ TPH Diesel Range
	Analyte Code	Analyte	14.77	District Control of the Control of t
	9369	Diesel range	organics (DRO)	
IWTPH-Gx			90018603	Oregon DEQ TPH Gasoline Range Organics by GC/FID-PID Purge & Trap
	Analyte Code	Analyte		
	9408	Gasoline rar	ge organics (GR	0)
IWTPH-HC	ID		90013200	Oregon DEQ Total Petroleum Hydrocarbon ID
	Analyte Code	Analyte		
	2050		um Hydrocarbons	s (TPH)
OA-1			90013802	Iowa TPH Gx by GC/PID Purge & Trap
	Analyte Code	Analyte		
	9408		ge organics (GR0	0)
DA-2			90014009	Iowa TPH Dx
	Analyte Code	Analyte		

ORELAP ID: TN200002

EPA CODE: TN00003

Certificate: TN200002 - 008

Environmental Science Corporation

12065 Lebanon Road

Mt. Juliet

TN 37122

Issue Date:

01/16/2012

Expiration Date: 01/15/2013

As of 01/16/2012

this list supercedes all previous lists for this certificate number.

Customers. Please verify the current accreditation standing with ORELAP.

SM 2540 G 20th ED

20005258

Total, Fixed, and Volatile Solids in Solid and Semisolid Samples

Analyte Code

Analyte

1725

Total, fixed, and volatile residue



